



# THE DATASHEET OF SLP-D2A435D1EU

About Samsung Electronics Co., Ltd.

Samsung Electronics Co. Ltd inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and semiconductor and LED solutions. For the latest news, please visit the Samsung Newsroom at <http://news.samsung.com>.

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[www.samsungled.com](http://www.samsungled.com)

# SAMSUNG LED

## Lighting & Beyond

*fue*LED BY SAMSUNG

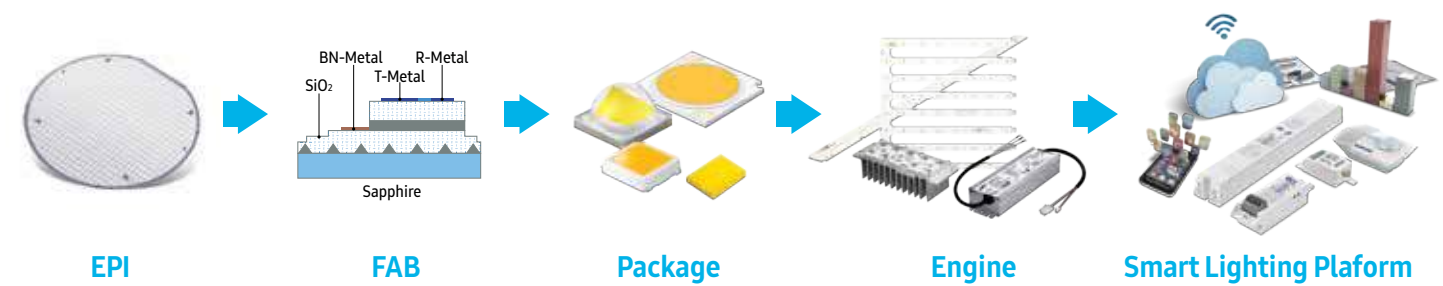
# Overview & Technology

Samsung Electronics Co., Ltd. is a global leader in consumer electronics and the core components that go into them.



Samsung aspires to create new technologies and innovative products that inspire the world, while delivering new value to enhance the lives of customers, partners and employees.

## Vertically Integrated Solution Provider



## Samsung Electronics



1969

Company  
Founded



Vision 2020

Inspire the world,  
create the future



308,745+

Employees  
in 79 Countries

## Innovation & Market Leadership



7

Design Centers



34

R&D Centers



6<sup>th</sup>

Best Global Brand 2017

## Reliable, on-time delivery without delays



# Life and LED Business Solution Partner

LED technology has started a new era of innovation and game-changing trends affecting diverse applications and lighting industries.

In particular, as countries around the world strengthen energy conservation programs and push for related legislation enforcement, demand for energy-efficient lighting is on the rise at a rapid pace.

Samsung's LED Business aims to achieve excellence as a long life, energy saving and eco-friendly light source supplier in lighting applications.

Samsung's advanced semiconductor manufacturing expertise serves as a strong foundation to deliver state-of-the-art LED devices.

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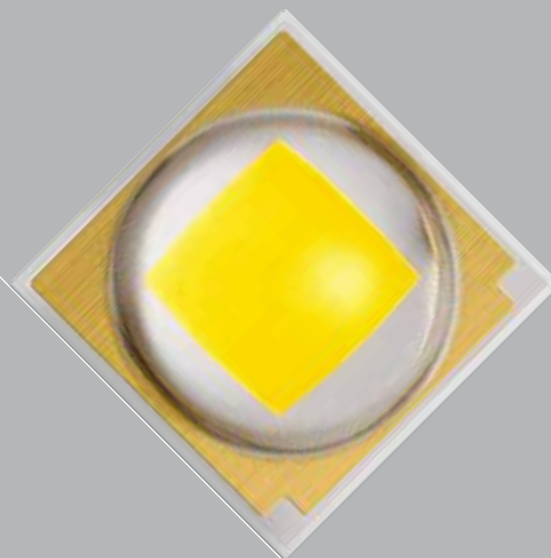
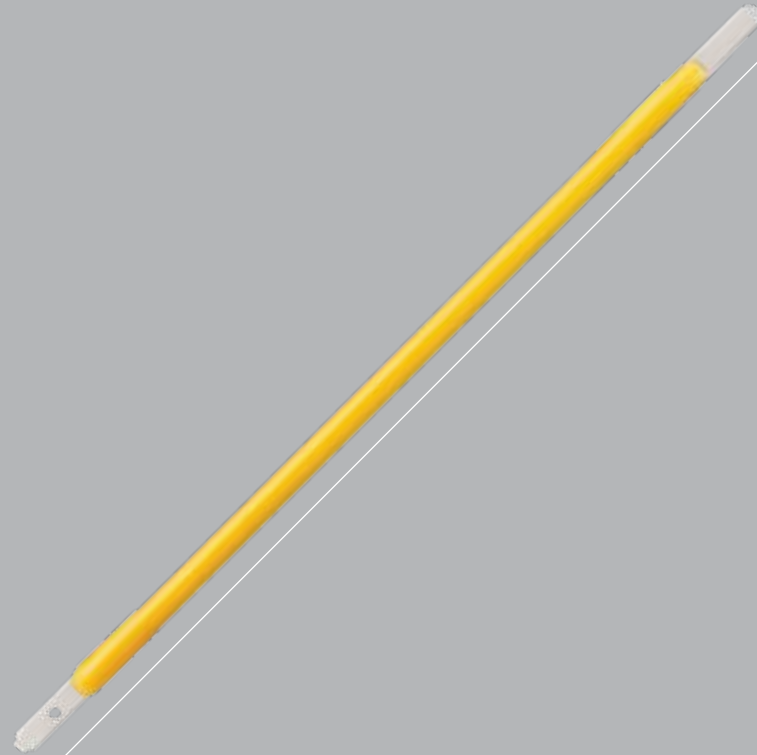
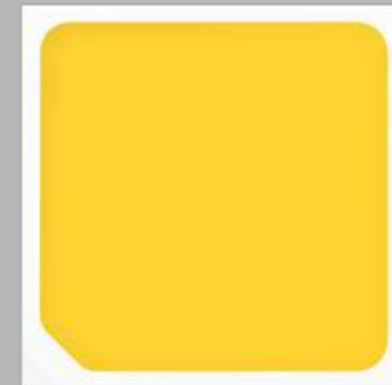
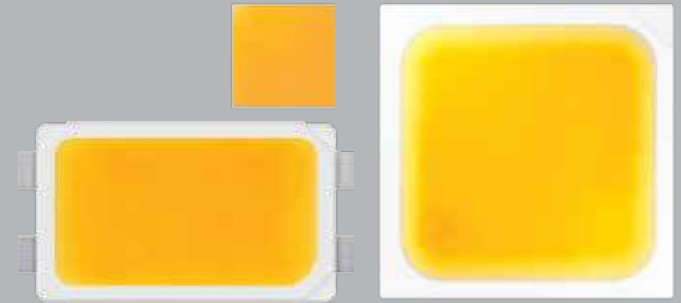
### Driver

- 100 White Tunable Light
- 102 Ambient Light
- 103 Industrial Light
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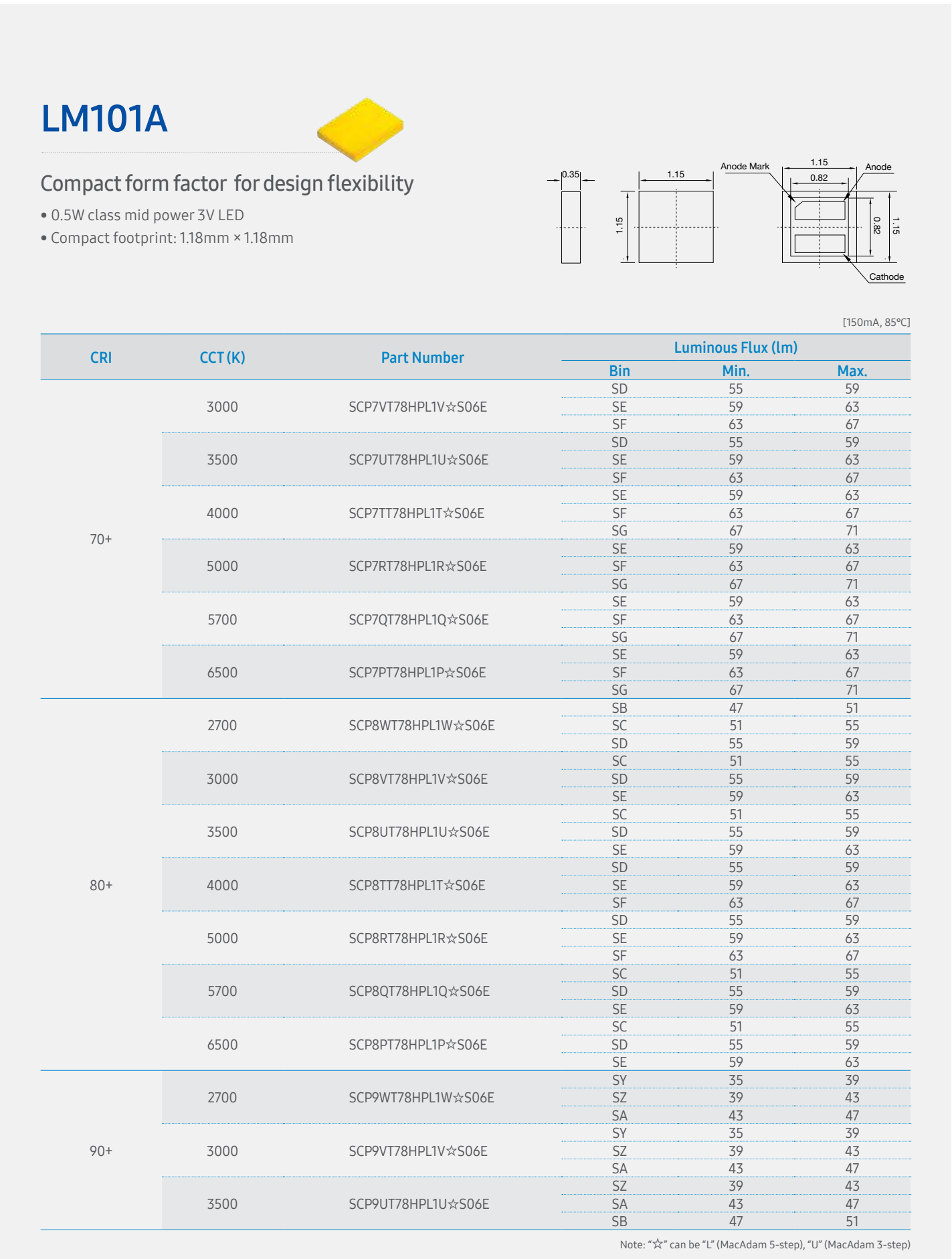
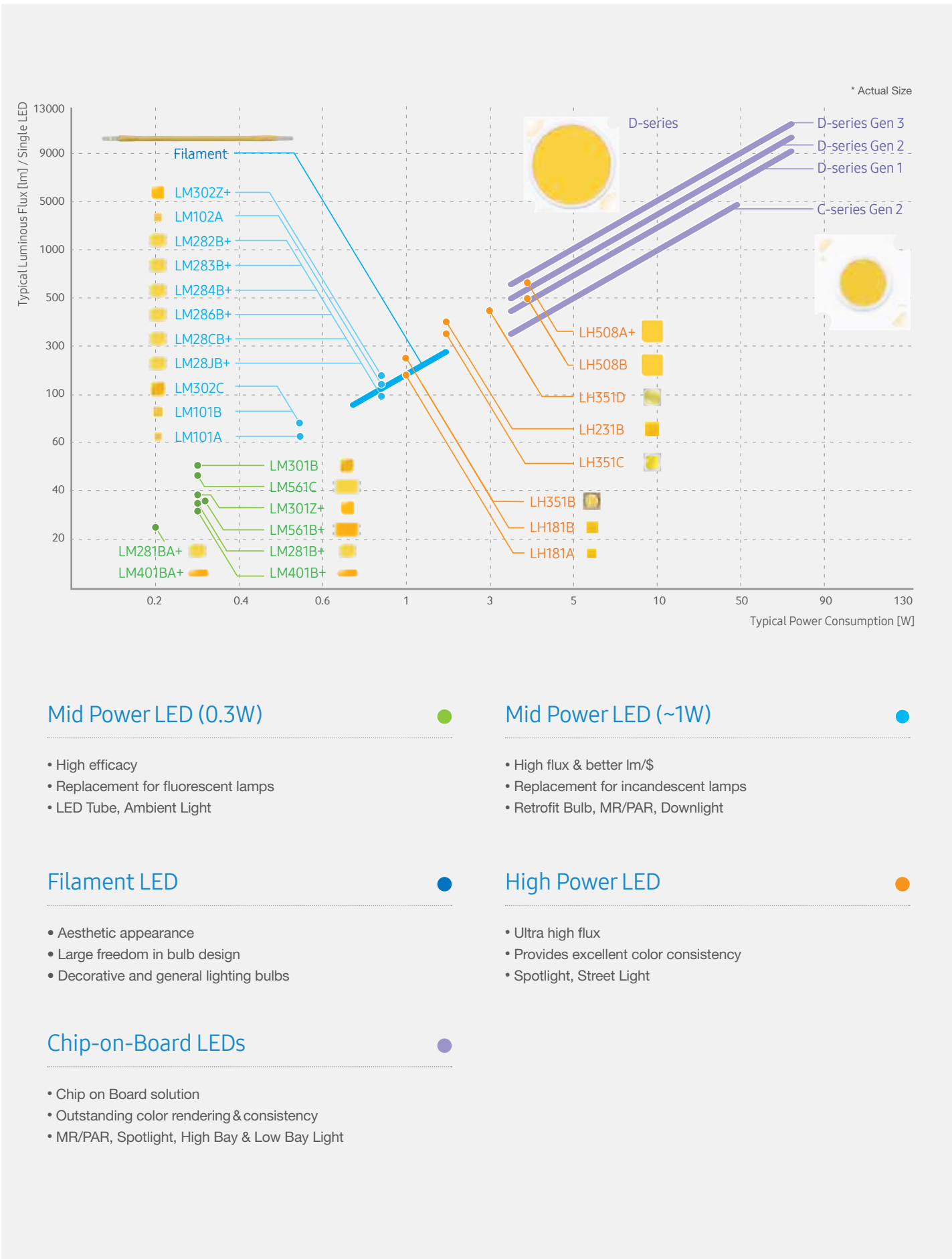


# Component

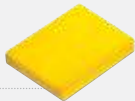
Samsung LED



CSP LEDs  
Mid Power LEDs  
Filament LEDs  
High Power LEDs  
COB LEDs

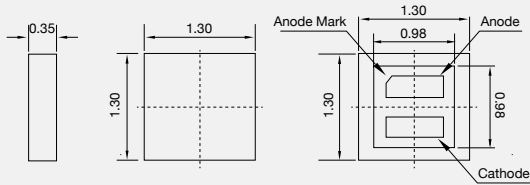


LM102A



Compact form factor for design flexibility

- 1W class mid power 6V LED
- Compact footprint: 1.34mm × 1.34mm



[150mA, 85°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 3000    | SCS7VT93HPL2V☆S03F | SD                 | 103  | 111  |
|     |         |                    | SE                 | 111  | 119  |
|     | 3500    | SCS7UT93HPL2U☆S03F | SD                 | 103  | 111  |
|     |         |                    | SE                 | 111  | 119  |
|     | 4000    | SCS7TT93HPL2T☆S03F | SE                 | 111  | 119  |
|     |         |                    | SF                 | 119  | 127  |
|     | 5000    | SCS7RT93HPL2R☆S03F | SE                 | 111  | 119  |
|     |         |                    | SF                 | 119  | 127  |
|     | 5700    | SCS7QT93HPL2Q☆S03F | SE                 | 111  | 119  |
|     |         |                    | SF                 | 119  | 127  |
|     | 6500    | SCS7PT93HPL2P☆S03F | SE                 | 111  | 119  |
|     |         |                    | SF                 | 119  | 127  |
| 80+ | 2700    | SCS8WT93HPL2W☆S03F | SC                 | 95   | 103  |
|     |         |                    | SD                 | 103  | 111  |
|     | 3000    | SCS8VT93HPL2V☆S03F | SC                 | 95   | 103  |
|     |         |                    | SD                 | 103  | 111  |
|     | 3500    | SCS8UT93HPL2U☆S03F | SD                 | 103  | 111  |
|     |         |                    | SE                 | 111  | 119  |
|     | 4000    | SCS8TT93HPL2T☆S03F | SD                 | 103  | 111  |
|     |         |                    | SE                 | 111  | 119  |
|     | 5000    | SCS8RT93HPL2R☆S03F | SE                 | 111  | 119  |
|     |         |                    | SF                 | 119  | 127  |
|     | 5700    | SCS8QT93HPL2Q☆S03F | SD                 | 103  | 111  |
|     |         |                    | SE                 | 111  | 119  |
|     | 6500    | SCS8PT93HPL2P☆S03F | SD                 | 103  | 111  |
|     |         |                    | SE                 | 111  | 119  |
| 90+ | 2700    | SCS9WT93HPL2W☆S03F | SA                 | 79   | 87   |
|     |         |                    | SB                 | 87   | 95   |
|     | 3000    | SCS9VT93HPL2V☆S03F | SA                 | 79   | 87   |
|     |         |                    | SB                 | 87   | 95   |
|     | 3500    | SCS9UT93HPL2U☆S03F | SA                 | 79   | 87   |
|     |         |                    | SB                 | 87   | 95   |

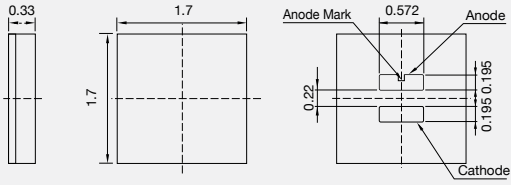
Note: "☆" can be "L" (MacAdam 5-step), "U" (MacAdam 3-step)

LM101B



Compact form factor for design flexibility

- 0.5W class mid power 3V LED
- Compact footprint: 1.70mm × 1.70mm



[150mA, 85°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 2700    | SCP7WT78HEL1W☆S06E | SE                 | 59   | 63   |
|     |         |                    | SF                 | 63   | 67   |
|     | 3000    | SCP7VT78HEL1V☆S06E | SF                 | 63   | 67   |
|     |         |                    | SG                 | 67   | 71   |
|     | 3500    | SCP7UT78HEL1U☆S06E | SF                 | 63   | 67   |
|     |         |                    | SG                 | 67   | 71   |
|     | 4000    | SCP7TT78HEL1T☆S06E | SG                 | 67   | 71   |
|     |         |                    | SH                 | 71   | 75   |
|     | 5000    | SCP7RT78HEL1R☆S06E | SG                 | 67   | 71   |
|     |         |                    | SH                 | 71   | 75   |
|     | 5700    | SCP7QT78HEL1Q☆S06E | SF                 | 63   | 67   |
|     |         |                    | SG                 | 67   | 71   |
|     | 6500    | SCP7PT78HEL1P☆S06E | SF                 | 63   | 67   |
|     |         |                    | SG                 | 67   | 71   |
| 80+ | 2700    | SCP8WT78HEL1W☆S06E | SD                 | 55   | 59   |
|     |         |                    | SE                 | 59   | 63   |
|     | 3000    | SCP8VT78HEL1V☆S06E | SE                 | 59   | 63   |
|     |         |                    | SF                 | 63   | 67   |
|     | 3500    | SCP8UT78HEL1U☆S06E | SE                 | 59   | 63   |
|     |         |                    | SF                 | 63   | 67   |
|     | 4000    | SCP8TT78HEL1T☆S06E | SF                 | 63   | 67   |
|     |         |                    | SG                 | 67   | 71   |
|     | 5000    | SCP8RT78HEL1R☆S06E | SF                 | 63   | 67   |
|     |         |                    | SG                 | 67   | 71   |
|     | 5700    | SCP8QT78HEL1Q☆S06E | SE                 | 59   | 63   |
|     |         |                    | SF                 | 63   | 67   |
|     | 6500    | SCP8PT78HEL1P☆S06E | SE                 | 59   | 63   |
|     |         |                    | SF                 | 63   | 67   |
| 90+ | 2700    | SCP9WT78HEL1W☆S06E | SA                 | 43   | 47   |
|     |         |                    | SB                 | 47   | 51   |
|     | 3000    | SCP9VT78HEL1V☆S06E | SA                 | 43   | 47   |
|     |         |                    | SB                 | 47   | 51   |
|     | 3500    | SCP9UT78HEL1U☆S06E | SB                 | 47   | 51   |
|     |         |                    | SC                 | 51   | 55   |
|     | 4000    | SCP9TT78HEL1T☆S06E | SB                 | 47   | 51   |
|     |         |                    | SC                 | 51   | 55   |
|     | 5000    | SCP9RT78HEL1R☆S06E | SB                 | 47   | 51   |
|     |         |                    | SC                 | 51   | 55   |

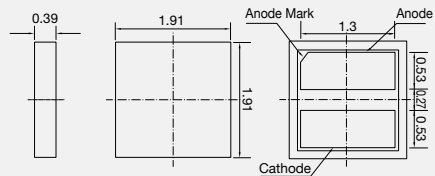
Note: "☆" can be "L" (MacAdam 5-step), "U" (MacAdam 3-step)

LH181A



Compact form factor for design flexibility

- 3W class high power CSP
- High performance and superior lm/\$
- Compact footprint: 1.9mm x 1.9mm



[350mA, 85°C]

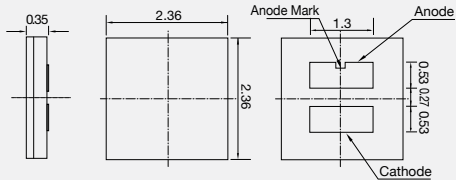
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 2700    | SCP7WTF1HPLAW0J34E | J1, K1, M1         | 120  | 150  |
|     | 3000    | SCP7VTF1HPLAV0K34E | K1, M1, N1         | 130  | 160  |
|     | 3500    | SCP7UTF1HPLAU0K34E | K1, M1, N1         | 130  | 160  |
|     | 4000    | SCP7TTF1HPLAT0M34E | M1, N1, P1         | 140  | 170  |
|     | 5000    | SCP7RTF1HPLARTM34E | M1, N1, P1         | 140  | 170  |
|     | 5700    | SCP7QTF1HPLAQTM34E | M1, N1, P1         | 140  | 170  |
|     | 6500    | SCP7PTF1HPLAPTM34E | M1, N1, P1         | 140  | 170  |
| 80+ | 2700    | SCP8WTF1HPLAW0J34E | J1, K1, M1         | 120  | 150  |
|     | 3000    | SCP8VTF1HPLAV0K34E | K1, M1, N1         | 130  | 160  |
|     | 3500    | SCP8UTF1HPLAU0K34E | K1, M1, N1         | 130  | 160  |
|     | 4000    | SCP8TTF1HPLAT0K34E | K1, M1, N1         | 130  | 160  |
|     | 5000    | SCP8RTF1HPLARTK34E | K1, M1, N1         | 130  | 160  |
|     | 5700    | SCP8QTF1HPLAQTK34E | K1, M1, N1         | 130  | 160  |
|     | 6500    | SCP8PTF1HPLAPTK34E | K1, M1, N1         | 130  | 160  |
| 90+ | 3000    | SCP9VTF1HPLAV0G34E | G1, H1, J1         | 100  | 130  |
|     | 4000    | SCP9TTF1HPLAT0G34E | G1, H1, J1         | 100  | 130  |

LH181B



Compact form factor for design flexibility

- 3W class high power CSP
- Higher performance by applying new structure
- Compact footprint: 2.36mm x 2.36mm



[350mA, 85°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 2700    | SCP7WTF1HEL1W◇M34E | M1, N1, P1         | 140  | 170  |
|     | 3000    | SCP7VTF1HEL1V◇N34E | N1, P1, Q1         | 150  | 180  |
|     | 3500    | SCP7UTF1HEL1U◇N34E | N1, P1, Q1         | 150  | 180  |
|     | 4000    | SCP7TTF1HEL1T◇P34E | P1, Q1, R1         | 160  | 190  |
|     | 5000    | SCP7RTF1HEL1R◇P34E | P1, Q1, R1         | 160  | 190  |
|     | 5700    | SCP7QTF1HEL1Q◇P34E | P1, Q1, R1         | 160  | 190  |
|     | 6500    | SCP7PTF1HEL1P◇N34E | N1, P1, Q1         | 150  | 180  |
| 80+ | 2700    | SCP8WTF1HEL1W◇K34E | K1, M1, N1         | 130  | 160  |
|     | 3000    | SCP8VTF1HEL1V◇K34E | K1, M1, N1         | 130  | 160  |
|     | 3500    | SCP8UTF1HEL1U◇M34E | M1, N1, P1         | 140  | 170  |
|     | 4000    | SCP8TTF1HEL1T◇M34E | M1, N1, P1         | 140  | 170  |
|     | 5000    | SCP8RTF1HEL1R◇N34E | N1, P1, Q1         | 150  | 180  |
|     | 5700    | SCP8QTF1HEL1Q◇N34E | N1, P1, Q1         | 150  | 180  |
|     | 6500    | SCP8PTF1HEL1P◇M34E | M1, N1, P1         | 140  | 170  |
| 90+ | 2700    | SCP9WTF1HEL1W◇G34E | G1, H1, J1         | 100  | 130  |
|     | 3000    | SCP9VTF1HEL1V◇G34E | G1, H1, J1         | 100  | 130  |
|     | 3500    | SCP9UTF1HEL1U◇H34E | H1, J1, K1         | 110  | 140  |
|     | 4000    | SCP9TTF1HEL1T◇H34E | H1, J1, K1         | 110  | 140  |
|     | 5000    | SCP9RTF1HEL1R◇H34E | H1, J1, K1         | 110  | 140  |

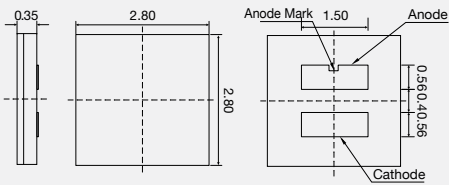
\* "◇" can be "K" (MacAdam 5-step ellipse bin), "U" (MacAdam 3-step ellipse bin) of the color binning

LH231B



Compact form factor for design flexibility

- 5W class super high power CSP
- Suitable for highbay lighting, stadium lighting
- Compact footprint: 2.80mm x 2.80mm



[700mA, 85°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 2700    | SCP7WTJ5HEL1W☆MF6E | MB, NB, PB         | 250  | 310  |
|     | 3000    | SCP7VTJ5HEL1V☆NF6E | NB, PB, QB         | 270  | 330  |
|     | 3500    | SCP7UTJ5HEL1U☆PF6E | PB, QB, RB         | 290  | 350  |
|     | 4000    | SCP7TTJ5HEL1T☆QF6E | QB, RB, SB         | 310  | 370  |
|     | 5000    | SCP7RTJ5HEL1R☆QF6E | QB, RB, SB         | 310  | 370  |
|     | 5700    | SCP7QTJ5HEL1Q☆QF6E | QB, RB, SB         | 310  | 370  |
|     | 6500    | SCP7PTJ5HEL1P☆PF6E | PB, QB, RB         | 290  | 350  |
| 80+ | 2700    | SCP8WTJ5HEL1W☆MF6E | MB, NB, PB         | 250  | 310  |
|     | 3000    | SCP8VTJ5HEL1V☆MF6E | MB, NB, PB         | 250  | 310  |
|     | 3500    | SCP8UTJ5HEL1U☆NF6E | NB, PB, QB         | 270  | 330  |
|     | 4000    | SCP8TTJ5HEL1T☆NF6E | NB, PB, QB         | 270  | 330  |
|     | 5000    | SCP8RTJ5HEL1R☆PF6E | PB, QB, RB         | 290  | 350  |
|     | 5700    | SCP8QTJ5HEL1Q☆NF6E | NB, PB, QB         | 270  | 330  |
|     | 6500    | SCP8PTJ5HEL1P☆NF6E | NB, PB, QB         | 270  | 330  |
| 90+ | 2700    | SCP9WTJ5HEL1W☆HF6E | HB, JB, KB         | 190  | 250  |
|     | 3000    | SCP9VTJ5HEL1V☆HF6E | HB, JB, KB         | 190  | 250  |
|     | 3500    | SCP9UTJ5HEL1U☆JF6E | JB, KB, MB         | 210  | 270  |
|     | 4000    | SCP9TTJ5HEL1T☆JF6E | JB, KB, MB         | 210  | 270  |

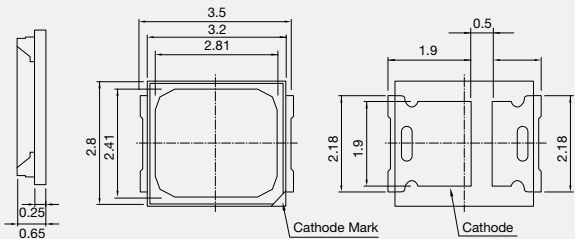
\* "☆" can be "L" (MacAdam 5-step ellipse bin), "U" (MacAdam 3-step ellipse bin) of the color binning

LM281BA Plus



Designed for better lm/\$

- 0.2W class mid power 3V LED
- Suitable for ambient lights, downlights & lamps
- Standard footprint: 2.8mm x 3.5mm



[60mA, 25°C]

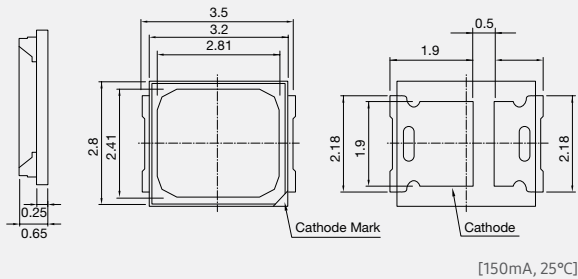
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH22286D5WAW0S2 | S2                 | 21.0 | 23.0 |
|     |         | SPMWH22286D5WAW0S3 | S3                 | 23.0 | 25.0 |
|     | 3000    | SPMWH22286D5WAV0S2 | S2                 | 21.5 | 23.5 |
|     |         | SPMWH22286D5WAV0S3 | S3                 | 23.5 | 25.5 |
|     | 3500    | SPMWH22286D5WAU0S2 | S2                 | 22.5 | 24.5 |
|     |         | SPMWH22286D5WAU0S3 | S3                 | 24.5 | 26.5 |
|     | 4000    | SPMWH22286D5WAT0S2 | S2                 | 23.0 | 25.0 |
|     |         | SPMWH22286D5WAT0S3 | S3                 | 25.0 | 27.0 |
|     | 5000    | SPMWH22286D5WAR0S2 | S2                 | 23.5 | 25.5 |
|     |         | SPMWH22286D5WAR0S3 | S3                 | 25.5 | 27.5 |
|     | 5700    | SPMWH22286D5WAQ0S2 | S2                 | 23.5 | 25.5 |
|     |         | SPMWH22286D5WAQ0S3 | S3                 | 25.5 | 27.5 |
|     | 6500    | SPMWH22286D5WAP0S2 | S2                 | 23.0 | 25.0 |
|     |         | SPMWH22286D5WAP0S3 | S3                 | 25.0 | 27.0 |
| 90+ | 2700    | SPMWH22286D7WAW0S2 | S2                 | 18.0 | 19.5 |
|     |         | SPMWH22286D7WAW0S3 | S3                 | 19.5 | 21.0 |
|     | 3000    | SPMWH22286D7WAV0S2 | S2                 | 18.5 | 20.0 |
|     |         | SPMWH22286D7WAV0S3 | S3                 | 20.0 | 21.5 |
|     | 3500    | SPMWH22286D7WAU0S2 | S2                 | 19.0 | 21.5 |
|     |         | SPMWH22286D7WAU0S3 | S3                 | 21.5 | 23.0 |
|     | 4000    | SPMWH22286D7WAT0S2 | S2                 | 19.5 | 21.0 |
|     |         | SPMWH22286D7WAT0S3 | S3                 | 21.0 | 22.5 |
|     | 5000    | SPMWH22286D7WAR0S2 | S2                 | 20.0 | 21.5 |
|     |         | SPMWH22286D7WAR0S3 | S3                 | 21.5 | 23.0 |
|     | 5700    | SPMWH22286D7WAQ0S2 | S2                 | 20.0 | 21.5 |
|     |         | SPMWH22286D7WAQ0S3 | S3                 | 21.5 | 23.0 |
|     | 6500    | SPMWH22286D7WAP0S2 | S2                 | 19.5 | 21.0 |
|     |         | SPMWH22286D7WAP0S3 | S3                 | 21.0 | 22.5 |

LM281B Plus



Designed for better lm/\$

- 0.5W class mid power LED
- Suitable for ambient lights, downlights & lamps
- Standard footprint: 2.8mm x 3.5mm



| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH1228FD5WAW0SA | SA                 | 52.5 | 56.5 |
|     |         | SPMWH1228FD5WAW0SC | SC                 | 56.5 | 60.5 |
|     |         | SPMWH1228FD5WAW0SE | SE                 | 60.5 | 64.5 |
|     |         | SPMWH1228FD5WAW0SG | SG                 | 64.5 | 68.5 |
|     |         | SPMWH1228FD5WAW0SJ | SJ                 | 70.5 | 74.5 |
|     | 3000    | SPMWH1228FD5WAV0SA | SA                 | 54.5 | 58.5 |
|     |         | SPMWH1228FD5WAV0SC | SC                 | 58.5 | 62.5 |
|     |         | SPMWH1228FD5WAV0SE | SE                 | 62.5 | 66.5 |
|     |         | SPMWH1228FD5WAV0SG | SG                 | 66.5 | 70.5 |
|     |         | SPMWH1228FD5WAV0SJ | SJ                 | 72.5 | 76.5 |
|     | 3500    | SPMWH1228FD5WAU0SA | SA                 | 55.5 | 59.5 |
|     |         | SPMWH1228FD5WAU0SC | SC                 | 59.5 | 63.5 |
|     |         | SPMWH1228FD5WAU0SE | SE                 | 63.5 | 67.5 |
|     |         | SPMWH1228FD5WAU0SG | SG                 | 67.5 | 71.5 |
|     | 4000    | SPMWH1228FD5WAT0SA | SA                 | 58.0 | 62.0 |
|     |         | SPMWH1228FD5WAT0SC | SC                 | 62.0 | 66.0 |
|     |         | SPMWH1228FD5WAT0SE | SE                 | 66.0 | 70.0 |
|     |         | SPMWH1228FD5WAT0SG | SG                 | 70.0 | 74.0 |
|     |         | SPMWH1228FD5WAT0SJ | SJ                 | 76.0 | 80.0 |
|     | 5000    | SPMWH1228FD5WAR0SA | SA                 | 59.0 | 63.0 |
|     |         | SPMWH1228FD5WAR0SC | SC                 | 63.0 | 67.0 |
|     |         | SPMWH1228FD5WAR0SE | SE                 | 67.0 | 71.0 |
|     |         | SPMWH1228FD5WAR0SG | SG                 | 71.0 | 75.0 |
|     | 5700    | SPMWH1228FD5WAQ0SA | SA                 | 58.5 | 62.5 |
|     |         | SPMWH1228FD5WAQ0SC | SC                 | 62.5 | 66.5 |
|     |         | SPMWH1228FD5WAQ0SE | SE                 | 66.5 | 70.5 |
|     |         | SPMWH1228FD5WAQ0SG | SG                 | 70.5 | 74.5 |
|     |         | SPMWH1228FD5WAQ0SJ | SJ                 | 76.5 | 80.5 |
|     | 6500    | SPMWH1228FD5WAP0SA | SA                 | 58.0 | 62.0 |
|     |         | SPMWH1228FD5WAP0SC | SC                 | 62.0 | 66.0 |
|     |         | SPMWH1228FD5WAP0SE | SE                 | 66.0 | 70.0 |
|     |         | SPMWH1228FD5WAP0SG | SG                 | 70.0 | 74.0 |
|     |         | SPMWH1228FD5WAP0SJ | SJ                 | 76.0 | 80.0 |

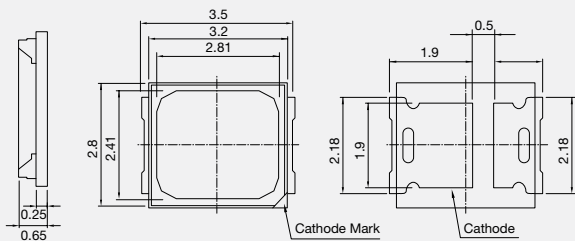
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 90+ | 2700    | SPMWH1228FD7WAW0SA | SA                 | 43.5 | 47.0 |
|     |         | SPMWH1228FD7WAW0SC | SC                 | 47.0 | 50.5 |
|     |         | SPMWH1228FD7WAW0SE | SE                 | 50.5 | 54.0 |
|     |         | SPMWH1228FD7WAW0SG | SG                 | 54.0 | 57.5 |
|     |         | SPMWH1228FD7WAW0SJ | SJ                 | 58.5 | 62.5 |
|     | 3000    | SPMWH1228FD7WAV0SA | SA                 | 48.0 | 51.5 |
|     |         | SPMWH1228FD7WAV0SC | SC                 | 51.5 | 55.0 |
|     |         | SPMWH1228FD7WAV0SE | SE                 | 55.0 | 58.5 |
|     |         | SPMWH1228FD7WAV0SG | SG                 | 58.5 | 62.0 |
|     |         | SPMWH1228FD7WAV0SJ | SJ                 | 60.5 | 64.5 |
|     | 3500    | SPMWH1228FD7WAU0SA | SA                 | 47.5 | 51.0 |
|     |         | SPMWH1228FD7WAU0SC | SC                 | 51.0 | 54.5 |
|     |         | SPMWH1228FD7WAU0SE | SE                 | 54.5 | 58.0 |
|     |         | SPMWH1228FD7WAU0SG | SG                 | 58.0 | 61.5 |
|     | 4000    | SPMWH1228FD7WAT0SA | SA                 | 49.0 | 52.5 |
|     |         | SPMWH1228FD7WAT0SC | SC                 | 52.5 | 56.0 |
|     |         | SPMWH1228FD7WAT0SE | SE                 | 56.0 | 59.5 |
|     |         | SPMWH1228FD7WAT0SG | SG                 | 59.5 | 63.0 |
|     |         | SPMWH1228FD7WAT0SJ | SJ                 | 65.3 | 69.3 |
|     | 5000    | SPMWH1228FD7WAR0SA | SA                 | 50.0 | 53.5 |
|     |         | SPMWH1228FD7WAR0SC | SC                 | 53.5 | 57.0 |
|     |         | SPMWH1228FD7WAR0SE | SE                 | 57.0 | 60.5 |
|     |         | SPMWH1228FD7WAR0SG | SG                 | 60.5 | 64.0 |
|     | 5700    | SPMWH1228FD7WAQ0SA | SA                 | 50.0 | 53.5 |
|     |         | SPMWH1228FD7WAQ0SC | SC                 | 53.5 | 57.0 |
|     |         | SPMWH1228FD7WAQ0SE | SE                 | 57.0 | 60.5 |
|     |         | SPMWH1228FD7WAQ0SG | SG                 | 60.5 | 64.0 |
|     |         | SPMWH1228FD7WAQ0SJ | SJ                 | 65.5 | 69.5 |
|     | 6500    | SPMWH1228FD7WAP0SA | SA                 | 49.0 | 52.5 |
|     |         | SPMWH1228FD7WAP0SC | SC                 | 52.5 | 56.0 |
|     |         | SPMWH1228FD7WAP0SE | SE                 | 56.0 | 59.5 |
|     |         | SPMWH1228FD7WAP0SG | SG                 | 59.5 | 63.0 |
|     |         | SPMWH1228FD7WAP0SJ | SJ                 | 65.3 | 69.3 |

LM282B Plus



Designed for better lm/\$

- 1W class mid power 6V LED
- Suitable for downlights, ambient lights & lamps
- Standard footprint: 2.8mm x 3.5mm

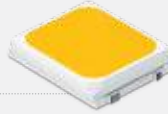


[150mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH1221FQ5GBW0SA | SA                 | 103  | 113  |
|     |         | SPMWH1221FQ5GBW0SB | SB                 | 113  | 123  |
|     | 3000    | SPMWH1221FQ5GBV0SA | SA                 | 107  | 117  |
|     |         | SPMWH1221FQ5GBV0SB | SB                 | 117  | 127  |
|     | 3500    | SPMWH1221FQ5GBU0SA | SA                 | 109  | 119  |
|     |         | SPMWH1221FQ5GBU0SB | SB                 | 119  | 129  |
|     | 4000    | SPMWH1221FQ5GBT0SA | SA                 | 113  | 123  |
|     |         | SPMWH1221FQ5GBT0SB | SB                 | 123  | 133  |
|     | 5000    | SPMWH1221FQ5GBR0SA | SA                 | 115  | 125  |
|     |         | SPMWH1221FQ5GBR0SB | SB                 | 125  | 135  |
|     | 5700    | SPMWH1221FQ5GBQ0SA | SA                 | 114  | 124  |
|     |         | SPMWH1221FQ5GBQ0SB | SB                 | 124  | 134  |
|     | 6500    | SPMWH1221FQ5GBP0SA | SA                 | 113  | 123  |
|     |         | SPMWH1221FQ5GBP0SB | SB                 | 123  | 133  |
| 90+ | 2700    | SPMWH1221FQ7GBW0SA | SA                 | 87   | 95   |
|     |         | SPMWH1221FQ7GBW0SB | SB                 | 95   | 103  |
|     | 3000    | SPMWH1221FQ7GBV0SA | SA                 | 90   | 98   |
|     |         | SPMWH1221FQ7GBV0SB | SB                 | 98   | 106  |
|     | 3500    | SPMWH1221FQ7GBU0SA | SA                 | 92   | 100  |
|     |         | SPMWH1221FQ7GBU0SB | SB                 | 100  | 108  |
|     | 4000    | SPMWH1221FQ7GBT0SA | SA                 | 95   | 103  |
|     |         | SPMWH1221FQ7GBT0SB | SB                 | 103  | 111  |
|     | 5000    | SPMWH1221FQ7GBR0SA | SA                 | 97   | 105  |
|     |         | SPMWH1221FQ7GBR0SB | SB                 | 105  | 113  |
|     | 5700    | SPMWH1221FQ7GBQ0SA | SA                 | 96   | 104  |
|     |         | SPMWH1221FQ7GBQ0SB | SB                 | 104  | 112  |
|     | 6500    | SPMWH1221FQ7GBP0SA | SA                 | 95   | 103  |
|     |         | SPMWH1221FQ7GBP0SB | SB                 | 103  | 111  |

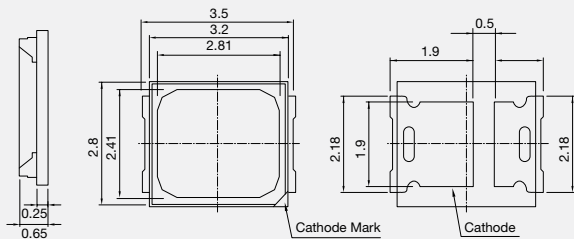
\* Color coordinates: Considering the color shift during high temp. operation, provided at hot temp. color shift coordinates.

LM283B Plus



Designed for better lm/\$

- 1W class mid power 9V LED
- Suitable for lamps & downlights
- Standard footprint: 2.8mm x 3.5mm



[100mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH1229AQ5SGW0SA | SA                 | 103  | 111  |
|     |         | SPMWH1229AQ5SGW0SB | SB                 | 111  | 121  |
|     | 3000    | SPMWH1229AQ5SGV0SA | SA                 | 107  | 115  |
|     |         | SPMWH1229AQ5SGV0SB | SB                 | 115  | 125  |
|     | 3500    | SPMWH1229AQ5SGU0SA | SA                 | 109  | 117  |
|     |         | SPMWH1229AQ5SGU0SB | SB                 | 117  | 127  |
|     | 4000    | SPMWH1229AQ5SGT0SA | SA                 | 113  | 121  |
|     |         | SPMWH1229AQ5SGT0SB | SB                 | 121  | 131  |
|     | 5000    | SPMWH1229AQ5SGR0SA | SA                 | 115  | 123  |
|     |         | SPMWH1229AQ5SGR0SB | SB                 | 123  | 133  |
|     | 5700    | SPMWH1229AQ5SGQ0SA | SA                 | 114  | 122  |
|     |         | SPMWH1229AQ5SGQ0SB | SB                 | 122  | 132  |
|     | 6500    | SPMWH1229AQ5SGP0SA | SA                 | 113  | 121  |
|     |         | SPMWH1229AQ5SGP0SB | SB                 | 121  | 131  |
| 90+ | 2700    | SPMWH1229AQ7SGW0SA | SA                 | 88   | 94   |
|     |         | SPMWH1229AQ7SGW0SB | SB                 | 94   | 104  |
|     | 3000    | SPMWH1229AQ7SGV0SA | SA                 | 91   | 98   |
|     |         | SPMWH1229AQ7SGV0SB | SB                 | 98   | 108  |
|     | 3500    | SPMWH1229AQ7SGU0SA | SA                 | 93   | 100  |
|     |         | SPMWH1229AQ7SGU0SB | SB                 | 100  | 110  |
|     | 4000    | SPMWH1229AQ7SGT0SA | SA                 | 96   | 103  |
|     |         | SPMWH1229AQ7SGT0SB | SB                 | 103  | 113  |
|     | 5000    | SPMWH1229AQ7SGR0SA | SA                 | 98   | 105  |
|     |         | SPMWH1229AQ7SGR0SB | SB                 | 105  | 115  |
|     | 5700    | SPMWH1229AQ7SGQ0SA | SA                 | 97   | 104  |
|     |         | SPMWH1229AQ7SGQ0SB | SB                 | 104  | 114  |
|     | 6500    | SPMWH1229AQ7SGP0SA | SA                 | 96   | 103  |
|     |         | SPMWH1229AQ7SGP0SB | SB                 | 103  | 113  |

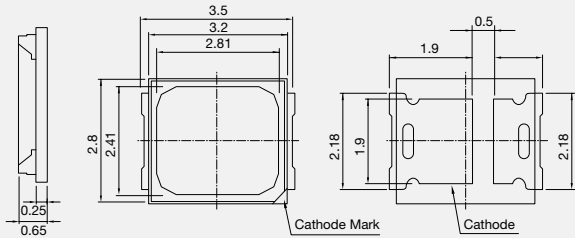
\* Color coordinates: Considering the color shift during high temp. operation, provided at hot temp. color shift coordinates.

LM284B Plus



Designed for better lm/\$

- 1W class mid power 12V LED
- Suitable for lamps & downlights
- Standard footprint: 2.8mm x 3.5mm



[75mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH122C7Q5SHW0SB | SB                 | 108  | 118  |
|     | 3000    | SPMWH122C7Q5SHV0SB | SB                 | 110  | 120  |
|     | 3500    | SPMWH122C7Q5SHU0SB | SB                 | 113  | 123  |
|     | 4000    | SPMWH122C7Q5SHT0SB | SB                 | 115  | 125  |
|     | 5000    | SPMWH122C7Q5SHR0SB | SB                 | 120  | 130  |
|     | 5700    | SPMWH122C7Q5SHQ0SB | SB                 | 118  | 128  |
|     | 6500    | SPMWH122C7Q5SHP0SB | SB                 | 115  | 125  |

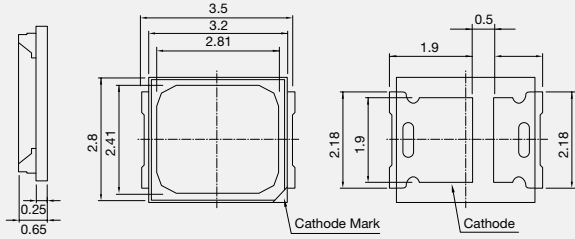
\* Color coordinates: Considering the color shift during high temp. operation, provided at hot temp. color shift coordinates.

LM286B Plus



Designed for better lm/\$

- 1W class mid power 18V LED
- Suitable for lamps & downlights
- Standard footprint: 2.8mm x 3.5mm



[50mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH12245Q5W8W0SA | SA                 | 95   | 105  |
|     |         | SPMWH12245Q5W8W0SB | SB                 | 120  | 130  |
|     | 3000    | SPMWH12245Q5W8V0SA | SA                 | 98   | 108  |
|     |         | SPMWH12245Q5W8V0SB | SB                 | 123  | 133  |
|     | 3500    | SPMWH12245Q5W8U0SA | SA                 | 102  | 112  |
|     |         | SPMWH12245Q5W8U0SB | SB                 | 127  | 137  |
|     | 4000    | SPMWH12245Q5W8T0SA | SA                 | 106  | 116  |
|     |         | SPMWH12245Q5W8T0SB | SB                 | 131  | 141  |
|     | 5000    | SPMWH12245Q5W8R0SA | SA                 | 109  | 119  |
|     |         | SPMWH12245Q5W8R0SB | SB                 | 134  | 144  |
|     | 5700    | SPMWH12245Q5W8Q0SA | SA                 | 107  | 117  |
|     |         | SPMWH12245Q5W8Q0SB | SB                 | 132  | 142  |
|     | 6500    | SPMWH12245Q5W8Q0SA | SA                 | 106  | 116  |
|     |         | SPMWH12245Q5W8Q0SB | SB                 | 130  | 140  |
| 90+ | 2700    | SPMWH12245Q7W8W0SA | SA                 | 80   | 90   |
|     | 3000    | SPMWH12245Q7W8V0SA | SA                 | 83   | 93   |
|     | 3500    | SPMWH12245Q7W8U0SA | SA                 | 86   | 96   |
|     | 4000    | SPMWH12245Q7W8T0SA | SA                 | 90   | 100  |
|     | 5000    | SPMWH12245Q7W8R0SA | SA                 | 92   | 102  |
|     | 5700    | SPMWH12245Q7W8Q0SA | SA                 | 91   | 101  |
|     | 6500    | SPMWH12245Q7W8Q0SA | SA                 | 90   | 100  |

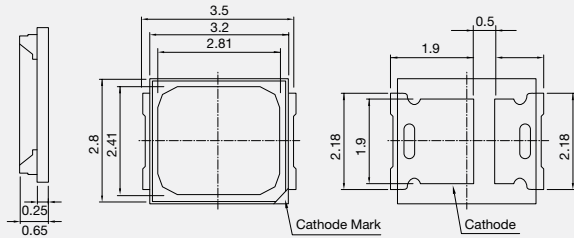
\*Color coordinates: Considering the color shift during high temp. operation, provided at hot temp. color shift coordinates.

LM28CB Plus



Designed for better lm/\$

- 1W class mid power 36V LED
- Suitable for lamps
- Standard footprint: 2.8mm x 3.5mm



[30mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH12253Q5SGW0SA | SA                 | 125  | 135  |
|     | 3000    | SPMWH12253Q5SGV0SA | SA                 | 128  | 138  |
|     | 3500    | SPMWH12253Q5SGU0SA | SA                 | 132  | 142  |
|     | 4000    | SPMWH12253Q5SGT0SA | SA                 | 136  | 146  |
|     | 5000    | SPMWH12253Q5SGR0SA | SA                 | 139  | 149  |
|     | 5700    | SPMWH12253Q5SGQ0SA | SA                 | 137  | 147  |
|     | 6500    | SPMWH12253Q5SGP0SA | SA                 | 136  | 146  |

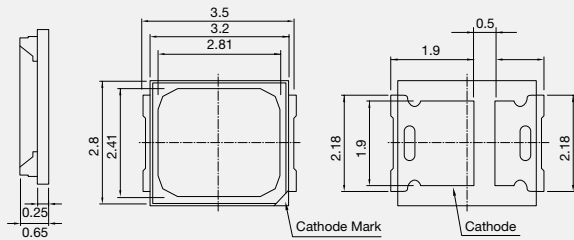
※ Color coordinates: Considering the color shift during high temp. operation, provided at hot temp. color shift coordinates.

LM28JB Plus



Designed for better lm/\$

- 1W class mid power 54V LED
- Suitable for lamps
- Standard footprint: 2.8mm x 3.5mm



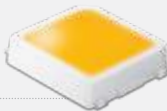
[20mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH12262Q5SGW0SA | SA                 | 125  | 135  |
|     | 3000    | SPMWH12262Q5SGV0SA | SA                 | 128  | 138  |
|     | 3500    | SPMWH12262Q5SGU0SA | SA                 | 132  | 142  |
|     | 4000    | SPMWH12262Q5SGT0SA | SA                 | 136  | 146  |
|     | 5000    | SPMWH12262Q5SGR0SA | SA                 | 139  | 149  |
|     | 5700    | SPMWH12262Q5SGQ0SA | SA                 | 137  | 147  |
|     | 6500    | SPMWH12262Q5SGP0SA | SA                 | 136  | 146  |

※ Color coordinates: Considering the color shift during high temp. operation, provided at hot temp. color shift coordinates.

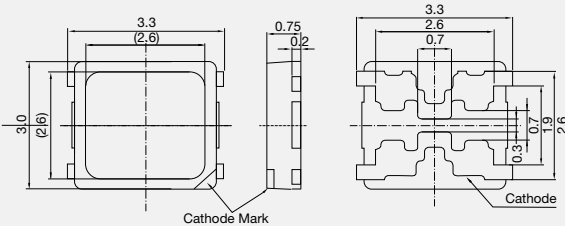


LM301B



High performance, highest lm/W for fluorescent lamp replacement

- 0.2W, 3V mid power LED
- Standard footprint: 3.0mm x 3.0mm



[65mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 3000    | SPMWHD32AMD3XAV0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     | 3500    | SPMWHD32AMD3XAU0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     | 4000    | SPMWHD32AMD3XAT0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SM                 | 40   | 42   |
|     | 5000    | SPMWHD32AMD3XAR0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SM                 | 40   | 42   |
| 80+ | 2700    | SPMWHD32AMD5XAW0S0 | SH                 | 32   | 34   |
|     |         |                    | SJ                 | 34   | 36   |
|     |         | SPMWHD32AMD5XAW0SH | SK                 | 36   | 38   |
|     |         |                    | SH                 | 32   | 34   |
|     |         | SPMWHD32AMD5XAW0SJ | SJ                 | 34   | 36   |
|     |         |                    | SJ                 | 34   | 36   |
|     | 3000    | SPMWHD32AMD5XAV0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         | SPMWHD32AMD5XAV0SJ | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         | SPMWHD32AMD5XAV0SK | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     | 3500    | SPMWHD32AMD5XAU0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         | SPMWHD32AMD5XAU0SK | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         | SPMWHD32AMD5XAU0SL | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     | 4000    | SPMWHD32AMD5XAT0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SM                 | 40   | 42   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SL                 | 38   | 40   |

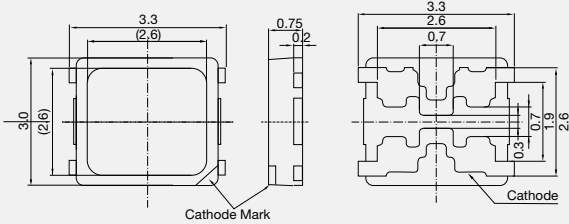
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 5000    | SPMWHD32AMD5XAR0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SM                 | 40   | 42   |
|     |         | SPMWHD32AMD5XAR0SK | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SL                 | 38   | 40   |
|     | 5700    | SPMWHD32AMD5XAQ0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SM                 | 40   | 42   |
|     |         | SPMWHD32AMD5XAQ0SK | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SL                 | 38   | 40   |
|     | 6500    | SPMWHD32AMD5XAP0S0 | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SM                 | 40   | 42   |
|     |         | SPMWHD32AMD5XAP0SK | SK                 | 36   | 38   |
|     |         |                    | SL                 | 38   | 40   |
|     |         |                    | SL                 | 38   | 40   |
| 90+ | 2700    | SPMWHD32AMD7XAW0S0 | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     | 3000    | SPMWHD32AMD7XAV0S0 | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     | 3500    | SPMWHD32AMD7XAU0S0 | SG                 | 30   | 32   |
|     |         |                    | SH                 | 32   | 34   |
|     | 4000    | SPMWHD32AMD7XAT0S0 | SG                 | 30   | 32   |
|     |         |                    | SH                 | 32   | 34   |
|     | 5000    | SPMWHD32AMD7XAR0S0 | SG                 | 30   | 32   |
|     |         |                    | SH                 | 32   | 34   |
|     | 5700    | SPMWHD32AMD7XAQ0S0 | SG                 | 30   | 32   |
|     |         |                    | SH                 | 32   | 34   |
|     | 6500    | SPMWHD32AMD7XAP0S0 | SG                 | 30   | 32   |
|     |         |                    | SH                 | 32   | 34   |

LM302C



High performance, highest lm/W for fluorescent lamp replacement

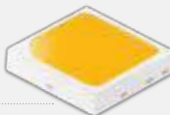
- 0.4W, 6V mid power LED
- Standard footprint: 3.0mm x 3.0mm



[65mA, 25°C]

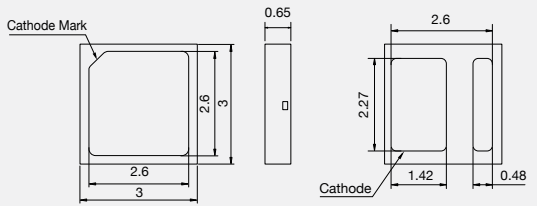
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 3000    | SPMWHT32BMD3YBV0S0 | SF                 | 62   | 66   |
|     |         |                    | SG                 | 66   | 70   |
|     |         |                    | SH                 | 70   | 74   |
|     | 3500    | SPMWHT32BMD3YBU0S0 | SF                 | 62   | 66   |
|     |         |                    | SG                 | 66   | 70   |
|     |         |                    | SH                 | 70   | 74   |
|     | 4000    | SPMWHT32BMD3YBT0S0 | SG                 | 66   | 70   |
|     |         |                    | SH                 | 70   | 74   |
|     |         |                    | SJ                 | 74   | 78   |
|     | 5000    | SPMWHT32BMD3YBR0S0 | SG                 | 66   | 70   |
|     |         |                    | SH                 | 70   | 74   |
|     |         |                    | SJ                 | 74   | 78   |
| 80+ | 2700    | SPMWHT32BMD5YBW0S0 | SD                 | 54   | 58   |
|     |         |                    | SE                 | 58   | 62   |
|     |         |                    | SF                 | 62   | 66   |
|     | 3000    | SPMWHT32BMD5YBV0S0 | SD                 | 54   | 58   |
|     |         |                    | SE                 | 58   | 62   |
|     |         |                    | SF                 | 62   | 66   |
|     | 3500    | SPMWHT32BMD5YBU0S0 | SE                 | 58   | 62   |
|     |         |                    | SF                 | 62   | 66   |
|     |         |                    | SG                 | 66   | 70   |
|     | 4000    | SPMWHT32BMD5YBT0S0 | SE                 | 58   | 62   |
|     |         |                    | SF                 | 62   | 66   |
|     |         |                    | SG                 | 66   | 70   |
|     | 5000    | SPMWHT32BMD5YBR0S0 | SF                 | 62   | 66   |
|     |         |                    | SG                 | 66   | 70   |
|     |         |                    | SH                 | 70   | 74   |
|     | 5700    | SPMWHT32BMD5YBQ0S0 | SE                 | 58   | 62   |
|     |         |                    | SF                 | 62   | 66   |
|     |         |                    | SG                 | 66   | 70   |
| 90+ | 6500    | SPMWHT32BMD5YBP0S0 | SE                 | 58   | 62   |
|     |         |                    | SF                 | 62   | 66   |
|     |         |                    | SG                 | 66   | 70   |
|     | 2700    | SPMWHT32BMD7YBW0S0 | SB                 | 46   | 50   |
|     |         |                    | SC                 | 50   | 54   |
|     |         |                    | SD                 | 54   | 58   |
|     | 3000    | SPMWHT32BMD7YBV0S0 | SB                 | 46   | 50   |
|     |         |                    | SC                 | 50   | 54   |
|     |         |                    | SD                 | 54   | 58   |
|     | 3500    | SPMWHT32BMD7YBU0S0 | SB                 | 46   | 50   |
|     |         |                    | SC                 | 50   | 54   |
|     |         |                    | SD                 | 54   | 58   |
|     | 4000    | SPMWHT32BMD7YBT0S0 | SC                 | 50   | 54   |
|     |         |                    | SD                 | 54   | 58   |
|     |         |                    | SE                 | 58   | 62   |
|     | 5000    | SPMWHT32BMD7YBR0S0 | SC                 | 50   | 54   |
|     |         |                    | SD                 | 54   | 58   |
|     |         |                    | SE                 | 58   | 62   |
|     | 5700    | SPMWHT32BMD7YBQ0S0 | SC                 | 50   | 54   |
|     |         |                    | SD                 | 54   | 58   |
|     |         |                    | SE                 | 58   | 62   |
|     | 6500    | SPMWHT32BMD7YBP0S0 | SC                 | 50   | 54   |
|     |         |                    | SD                 | 54   | 58   |
|     |         |                    | SE                 | 58   | 62   |
|     |         |                    | SD                 | 54   | 58   |
|     |         |                    | SE                 | 58   | 62   |
|     |         |                    | SE                 | 58   | 62   |

LM301Z Plus



Balanced lm/\$ for ambient

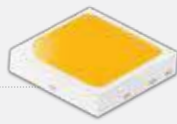
- 0.2W, 3V mid power LED
- EMC resin for high reliability
- Standard footprint: 3.0mm x 3.0mm



[65mA, 25°C]

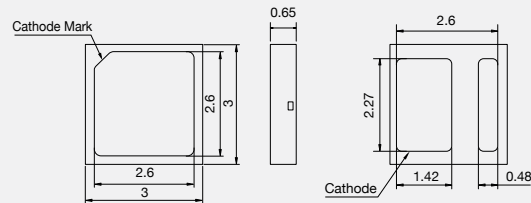
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 3000    | SPMWH3326MP3WAV0S0 | SH                 | 32   | 34   |
|     |         |                    | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     | 3500    | SPMWH3326MP3WU0S0  | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SG                 | 38   | 40   |
|     | 4000    | SPMWH3326MP3WAT0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SG                 | 38   | 40   |
|     | 5000    | SPMWH3326MP3WAR0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SG                 | 38   | 40   |
| 80+ | 5700    | SPMWH3326MP3WAQ0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SG                 | 38   | 40   |
|     | 2700    | SPMWH3326MP5WAW0S0 | SH                 | 32   | 34   |
|     |         |                    | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     | 3000    | SPMWH3326MP5WAV0S0 | SH                 | 32   | 34   |
|     |         |                    | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     | 3500    | SPMWH3326MP5WU0S0  | SH                 | 32   | 34   |
|     |         |                    | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     | 4000    | SPMWH3326MP5WAT0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SG                 | 38   | 40   |
|     | 5000    | SPMWH3326MP5WAR0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SG                 | 38   | 40   |
| 90+ | 5700    | SPMWH3326MP5WAQ0S0 | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     |         |                    | SG                 | 38   | 40   |
|     | 6500    | SPMWH3326MP5WAP0S0 | SH                 | 32   | 34   |
|     |         |                    | SJ                 | 34   | 36   |
|     |         |                    | SK                 | 36   | 38   |
|     | 2700    | SPMWH3326MP7WAW0S0 | SE                 | 26   | 28   |
|     |         |                    | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     | 3000    | SPMWH3326MP7WAV0S0 | SE                 | 26   | 28   |
|     |         |                    | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     | 3500    | SPMWH3326MP7WU0S0  | SE                 | 26   | 28   |
|     |         |                    | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     | 4000    | SPMWH3326MP7WAT0S0 | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     |         |                    | SE                 | 32   | 34   |
|     | 5000    | SPMWH3326MP7WAR0S0 | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     |         |                    | SE                 | 32   | 34   |
|     | 5700    | SPMWH3326MP7WAQ0S0 | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     |         |                    | SE                 | 32   | 34   |
|     | 6500    | SPMWH3326MP7WAP0S0 | SF                 | 28   | 30   |
|     |         |                    | SG                 | 30   | 32   |
|     |         |                    | SE                 | 32   | 34   |

LM302Z Plus



Balanced lm/\$ for highbay

- 0.9W, 6V mid power LED
- EMC resin for high reliability
- Standard footprint: 3.0mm x 3.0mm



[150mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 3000    | SPMWH3326FP3GBV0S0 | SG                 | 133  | 142  |
|     |         |                    | SH                 | 142  | 151  |
|     | 3500    | SPMWH3326FP3GBU0S0 | SG                 | 133  | 142  |
|     |         |                    | SH                 | 142  | 151  |
|     | 4000    | SPMWH3326FP3GBT0S0 | SH                 | 142  | 151  |
|     |         |                    | SJ                 | 151  | 160  |
|     | 5000    | SPMWH3326FP3GBR0S0 | SH                 | 142  | 151  |
|     |         |                    | SJ                 | 151  | 160  |
|     | 5700    | SPMWH3326FP3GBQ0S0 | SH                 | 142  | 151  |
|     |         |                    | SJ                 | 151  | 160  |
| 80+ | 2700    | SPMWH3326FP5GBW0S0 | SF                 | 124  | 133  |
|     |         |                    | SG                 | 133  | 142  |
|     | 3000    | SPMWH3326FP5GBV0S0 | SF                 | 124  | 133  |
|     |         |                    | SG                 | 133  | 142  |
|     | 3500    | SPMWH3326FP5GBU0S0 | SG                 | 133  | 142  |
|     |         |                    | SH                 | 142  | 151  |
|     | 4000    | SPMWH3326FP5GBT0S0 | SG                 | 133  | 142  |
|     |         |                    | SH                 | 142  | 151  |
|     | 5000    | SPMWH3326FP5GBR0S0 | SG                 | 133  | 142  |
|     |         |                    | SH                 | 142  | 151  |
|     | 5700    | SPMWH3326FP5GBQ0S0 | SG                 | 133  | 142  |
|     |         |                    | SH                 | 142  | 151  |
|     | 6500    | SPMWH3326FP5GBP0S0 | SG                 | 133  | 142  |
|     |         |                    | SH                 | 142  | 151  |

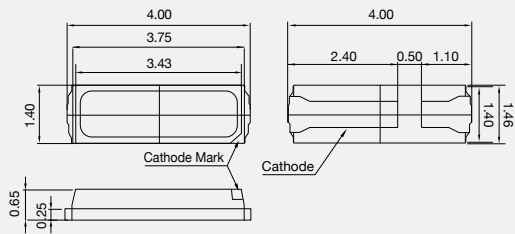
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 90+ | 2700    | SPMWH3326FP7GBW0S0 | SC                 | 97   | 106  |
|     |         |                    | SD                 | 106  | 115  |
|     | 3000    | SPMWH3326FP7GBV0S0 | SD                 | 106  | 115  |
|     |         |                    | SE                 | 115  | 124  |
|     | 3500    | SPMWH3326FP7GBU0S0 | SD                 | 106  | 115  |
|     |         |                    | SE                 | 115  | 124  |
|     | 4000    | SPMWH3326FP7GBT0S0 | SE                 | 115  | 124  |
|     |         |                    | SF                 | 124  | 133  |
|     | 5000    | SPMWH3326FP7GBR0S0 | SE                 | 115  | 124  |
|     |         |                    | SF                 | 124  | 133  |
|     | 5700    | SPMWH3326FP7GBQ0S0 | SE                 | 115  | 124  |
|     |         |                    | SF                 | 124  | 133  |
|     | 6500    | SPMWH3326FP7GBP0S0 | SE                 | 115  | 124  |
|     |         |                    | SF                 | 124  | 133  |

LM401BA Plus



IP guaranteed mid-power 0.2W package for slim edge-lit panel applications

- 0.2W class mid power LED
- Suitable for slim edge-lit panel applications
- Standard footprint: 4.0mm x 1.4mm



[60mA, 25°C]

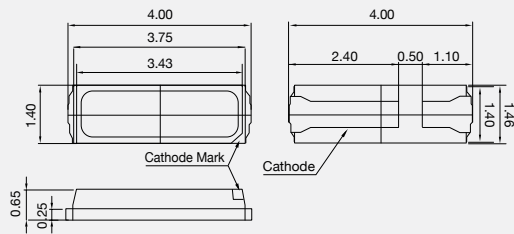
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWHT4106D5WAW0S* | S1                 | 21   | 23   |
|     |         |                    | S2                 | 23   | 25   |
|     |         |                    | S3                 | 25   | 27   |
|     |         |                    | S4                 | 27   | 29   |
|     | 3000    | SPMWHT4106D5WAV0S* | S1                 | 21   | 23   |
|     |         |                    | S2                 | 23   | 25   |
|     |         |                    | S3                 | 25   | 27   |
|     |         |                    | S4                 | 27   | 29   |
|     | 3500    | SPMWHT4106D5WAU0S* | S1                 | 22   | 24   |
|     |         |                    | S2                 | 24   | 26   |
|     |         |                    | S3                 | 26   | 28   |
|     |         |                    | S4                 | 28   | 30   |
|     | 4000    | SPMWHT4106D5WAT0S* | S1                 | 23   | 25   |
|     |         |                    | S2                 | 25   | 27   |
|     |         |                    | S3                 | 27   | 29   |
|     |         |                    | S4                 | 29   | 31   |
|     | 5000    | SPMWHT4106D5WAR0S* | S1                 | 24   | 26   |
|     |         |                    | S2                 | 26   | 28   |
|     |         |                    | S3                 | 28   | 30   |
|     |         |                    | S4                 | 30   | 32   |
|     | 5700    | SPMWHT4106D5WAQ0S* | S1                 | 23   | 25   |
|     |         |                    | S2                 | 25   | 27   |
|     |         |                    | S3                 | 27   | 29   |
|     |         |                    | S4                 | 29   | 31   |
|     | 6500    | SPMWHT4106D5WAP0S* | S1                 | 23   | 25   |
|     |         |                    | S2                 | 25   | 27   |
|     |         |                    | S3                 | 27   | 29   |
|     |         |                    | S4                 | 29   | 31   |

LM401B Plus



IP guaranteed mid-power 0.5W package for slim edge-lit panel applications

- 0.5W class mid power LED
- Suitable for slim edge-lit panel applications
- Standard footprint: 4.0mm x 1.4mm



[120mA, 25°C]

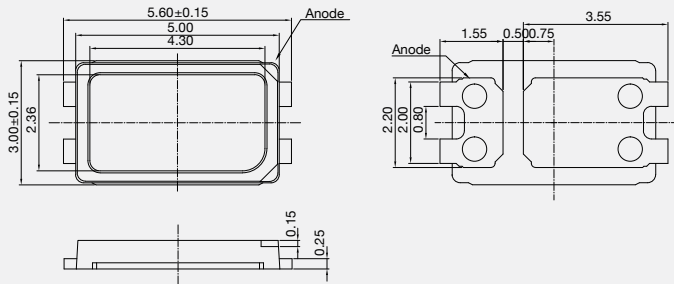
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 2700    | SPMWH1410CD5WAW0S* | S2                 | 40   | 44   |
|     |         |                    | S3                 | 44   | 48   |
|     |         |                    | S4                 | 48   | 52   |
|     |         |                    | S2                 | 40   | 44   |
|     | 3000    | SPMWH1410CD5WAV0S* | S3                 | 44   | 48   |
|     |         |                    | S4                 | 48   | 52   |
|     |         |                    | S2                 | 40   | 44   |
|     |         |                    | S3                 | 44   | 48   |
|     | 3500    | SPMWH1410CD5WAU0S* | S4                 | 48   | 52   |
|     |         |                    | S2                 | 44   | 48   |
|     |         |                    | S3                 | 48   | 52   |
|     |         |                    | S4                 | 52   | 56   |
|     | 4000    | SPMWH1410CD5WAT0S* | S2                 | 46   | 50   |
|     |         |                    | S3                 | 50   | 54   |
|     |         |                    | S4                 | 54   | 58   |
|     |         |                    | S2                 | 45   | 49   |
|     | 5000    | SPMWH1410CD5WAR0S* | S3                 | 49   | 53   |
|     |         |                    | S4                 | 53   | 57   |
|     |         |                    | S2                 | 44   | 48   |
|     |         |                    | S3                 | 48   | 52   |
|     | 5700    | SPMWH1410CD5WAQ0S* | S4                 | 52   | 56   |
|     |         |                    | S2                 | 44   | 48   |
|     |         |                    | S3                 | 48   | 52   |
|     |         |                    | S4                 | 52   | 56   |
|     | 6500    | SPMWH1410CD5WAP0S* | S2                 | 44   | 48   |
|     |         |                    | S3                 | 48   | 52   |
|     |         |                    | S4                 | 52   | 56   |
|     |         |                    | S2                 | 44   | 48   |

LM561B Plus



Improved efficacy and performance of LM561B to provide better solution

- 0.3 W class mid power LED
- High efficacy for distributed light
- Standard footprint: 5.6mm x 3.0mm



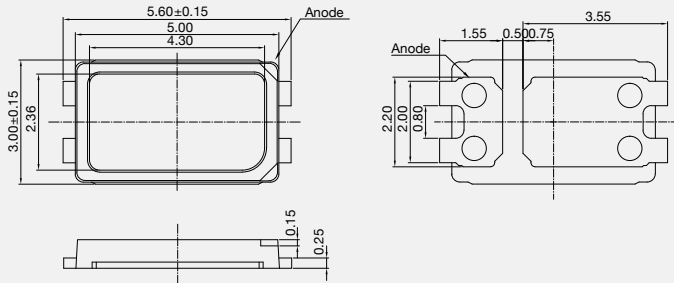
[65mA, 25°C]

| CRI                  | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|----------------------|---------|--------------------|--------------------|------|------|
|                      |         |                    | Bin                | Min. | Max. |
| 70+                  | 2700    | SPMWHT541MP3WAW0S0 | S5                 | 32.0 | 34.0 |
|                      |         |                    | S6                 | 34.0 | 36.0 |
|                      |         |                    | S7                 | 36.0 | 38.0 |
|                      | 3000    | SPMWHT541MP3WAV0S0 | S5                 | 32.5 | 34.5 |
|                      |         |                    | S6                 | 34.5 | 36.5 |
|                      |         |                    | S7                 | 36.5 | 38.5 |
|                      | 3500    | SPMWHT541MP3WAU0S0 | S5                 | 33.0 | 35.0 |
|                      |         |                    | S6                 | 35.0 | 37.0 |
|                      |         |                    | S7                 | 37.0 | 39.0 |
|                      | 4000    | SPMWHT541MP3WAT0S0 | S5                 | 34.0 | 35.8 |
|                      |         |                    | S6                 | 35.8 | 38.0 |
|                      |         |                    | S7                 | 38.0 | 40.0 |
| 80+                  | 2700    | SPMWHT541MP5WAW0S4 | S4                 | 30.0 | 32.0 |
|                      |         |                    | S5                 | 32.0 | 34.0 |
|                      |         |                    | S6                 | 34.0 | 36.0 |
|                      | 3000    | SPMWHT541MP5WAV0S4 | S4                 | 30.5 | 32.5 |
|                      |         |                    | S5                 | 32.5 | 34.5 |
|                      |         |                    | S6                 | 34.5 | 36.5 |
|                      | 3500    | SPMWHT541MP5WAU0S4 | S4                 | 31.0 | 33.0 |
|                      |         |                    | S5                 | 33.0 | 35.0 |
|                      |         |                    | S6                 | 35.0 | 37.0 |
|                      | 4000    | SPMWHT541MP5WAT0S4 | S4                 | 32.0 | 34.0 |
|                      |         |                    | S5                 | 34.0 | 36.0 |
|                      |         |                    | S6                 | 36.0 | 38.0 |
|                      | 5000    | SPMWHT541MP5WAR0S4 | S4                 | 33.0 | 35.0 |
|                      |         |                    | S5                 | 35.0 | 37.0 |
|                      |         |                    | S6                 | 37.0 | 39.0 |
|                      | 5700    | SPMWHT541MP5WAQ0S4 | S4                 | 32.5 | 34.5 |
|                      |         |                    | S5                 | 34.5 | 36.5 |
|                      |         |                    | S6                 | 36.5 | 38.5 |
| 90+                  | 2700    | SPMWHT541MP7WAW0S0 | S1                 | 24.0 | 26.0 |
|                      |         |                    | S2                 | 26.0 | 28.0 |
|                      | 3000    | SPMWHT541MP7WAV0S0 | S1                 | 24.5 | 26.5 |
|                      |         |                    | S2                 | 26.5 | 28.5 |
|                      | 3500    | SPMWHT541MP7WAU0S0 | S1                 | 25.0 | 27.0 |
|                      |         |                    | S2                 | 27.0 | 29.0 |
| 90+ Premium Efficacy | 4000    | SPMWHT541MP7WAT0S0 | S1                 | 26.0 | 28.0 |
|                      |         |                    | S2                 | 28.0 | 30.0 |
|                      | 5000    | SPMWHT541MP7WAR0S0 | S1                 | 27.0 | 29.0 |
|                      |         |                    | S2                 | 29.0 | 31.0 |
|                      | 5700    | SPMWHT541MP7WAQ0S0 | S1                 | 26.5 | 28.5 |
|                      |         |                    | S2                 | 28.5 | 30.5 |
|                      | 6500    | SPMWHT541MP7WAP0S0 | S1                 | 26.0 | 28.0 |
|                      |         |                    | S2                 | 28.0 | 30.0 |
|                      | 2700    | SPMWHT541MT7WAW0S0 | SB                 | 26.0 | 28.0 |
|                      |         |                    | SC                 | 28.0 | 30.0 |
|                      | 3000    | SPMWHT541MT7WAV0S0 | SB                 | 27.0 | 29.0 |
|                      |         |                    | SC                 | 29.0 | 31.0 |
| 90+ Premium Efficacy | 3500    | SPMWHT541MT7WAU0S0 | SB                 | 28.0 | 30.0 |
|                      |         |                    | SC                 | 30.0 | 32.0 |
|                      | 4000    | SPMWHT541MT7WAT0S0 | SB                 | 29.0 | 31.0 |
|                      |         |                    | SC                 | 31.0 | 33.0 |
|                      | 5000    | SPMWHT541MT7WAR0S0 | SB                 | 30.0 | 32.0 |
|                      |         |                    | SC                 | 32.0 | 34.0 |
|                      | 5700    | SPMWHT541MT7WAQ0S0 | SB                 | 29.0 | 31.0 |
|                      |         |                    | SC                 | 31.0 | 33.0 |
|                      | 6500    | SPMWHT541MT7WAP0S0 | SB                 | 28.0 | 30.0 |
|                      |         |                    | SC                 | 30.0 | 32.0 |

| CRI                  | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|----------------------|---------|--------------------|--------------------|------|------|
|                      |         |                    | Bin                | Min. | Max. |
| 90+                  | 2700    | SPMWHT541MP7WAW0S0 | S1                 | 24.0 | 26.0 |
|                      |         |                    | S2                 | 26.0 | 28.0 |
|                      |         |                    | S3                 | 28.0 | 30.0 |
|                      | 3000    | SPMWHT541MP7WAV0S0 | S1                 | 24.5 | 26.5 |
|                      |         |                    | S2                 | 26.5 | 28.5 |
|                      |         |                    | S3                 | 28.5 | 30.5 |
|                      | 3500    | SPMWHT541MP7WAU0S0 | S1                 | 25.0 | 27.0 |
|                      |         |                    | S2                 | 27.0 | 29.0 |
|                      |         |                    | S3                 | 29.0 | 31.0 |
|                      | 4000    | SPMWHT541MP7WAT0S0 | S1                 | 26.0 | 28.0 |
|                      |         |                    | S2                 | 28.0 | 30.0 |
|                      |         |                    | S3                 | 30.0 | 32.0 |
| 90+ Premium Efficacy | 5000    | SPMWHT541MP7WAR0S0 | S1                 | 27.0 | 29.0 |
|                      |         |                    | S2                 | 29.0 | 31.0 |
|                      |         |                    | S3                 | 31.0 | 33.0 |
|                      | 5700    | SPMWHT541MP7WAQ0S0 | S1                 | 26.5 | 28.5 |
|                      |         |                    | S2                 | 28.5 | 30.5 |
|                      |         |                    | S3                 | 30.5 | 32.5 |
|                      | 6500    | SPMWHT541MP7WAP0S0 | S1                 | 26.0 | 28.0 |
|                      |         |                    | S2                 | 28.0 | 30.0 |
|                      |         |                    | S3                 | 30.0 | 32.0 |
|                      | 2700    | SPMWHT541MT7WAW0S0 | SB                 | 26.0 | 28.0 |
|                      |         |                    | SC                 | 28.0 | 30.0 |
|                      | 3000    | SPMWHT541MT7WAV0S0 | SB                 | 27.0 | 29.0 |
|                      |         |                    | SC                 | 29.0 | 31.0 |
| 90+ Premium Efficacy | 3500    | SPMWHT541MT7WAU0S0 | SB                 | 28.0 | 30.0 |
|                      |         |                    | SC                 | 30.0 | 32.0 |
|                      | 4000    | SPMWHT541MT7WAT0S0 | SB                 | 29.0 | 31.0 |
|                      |         |                    | SC                 | 31.0 | 33.0 |
|                      | 5000    | SPMWHT541MT7WAR0S0 | SB                 | 30.0 | 32.0 |
|                      |         |                    | SC                 | 32.0 | 34.0 |
|                      | 5700    | SPMWHT541MT7WAQ0S0 | SB                 | 29.0 | 31.0 |
|                      |         |                    | SC                 | 31.0 | 33.0 |
|                      | 6500    | SPMWHT541MT7WAP0S0 | SB                 | 28.0 | 30.0 |
|                      |         |                    | SC                 | 30.0 | 32.0 |



LM561C



[65mA, 25°C]

High performance, highest lm/W for fluorescent lamp replacement

- 0.3W class mid power LED
- Highest efficacy: 210lm/W @65mA, 5000K, CRI 80
- Standard footprint: 5.6mm x 3.0mm

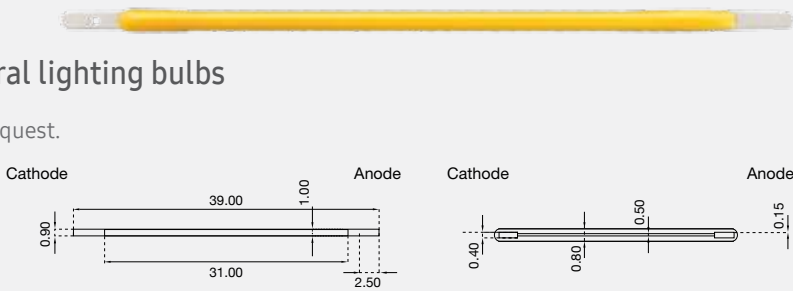
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 3000    | SPMWHT541ML3XAV0S0 | S5                 | 32.5 | 34.5 |
|     |         |                    | S6                 | 34.5 | 36.5 |
|     |         |                    | S7                 | 36.5 | 38.5 |
|     | 3500    | SPMWHT541ML3XAU0S0 | S5                 | 33.0 | 35.0 |
|     |         |                    | S6                 | 35.0 | 37.0 |
|     |         |                    | S7                 | 37.0 | 39.0 |
|     | 4000    | SPMWHT541ML3XAT0S0 | S5                 | 34.0 | 36.0 |
|     |         |                    | S6                 | 36.0 | 38.0 |
|     |         |                    | S7                 | 38.0 | 40.0 |
|     | 5000    | SPMWHT541ML3XAR0S0 | S5                 | 35.0 | 37.0 |
|     |         |                    | S6                 | 37.0 | 39.0 |
|     |         |                    | S7                 | 39.0 | 41.0 |
| 80+ | 2700    | SPMWHT541ML5XAW0S0 | S4                 | 30.0 | 32.0 |
|     |         |                    | S5                 | 32.0 | 34.0 |
|     | 3000    | SPMWHT541ML5XAV0S0 | S4                 | 30.5 | 32.5 |
|     |         |                    | S5                 | 32.5 | 34.5 |
|     |         |                    | S6                 | 34.5 | 36.5 |
|     | 3500    | SPMWHT541ML5XAU0S0 | S4                 | 31.0 | 33.0 |
|     |         |                    | S5                 | 33.0 | 35.0 |
|     |         |                    | S6                 | 35.0 | 37.0 |
|     | 4000    | SPMWHT541ML5XAT0S0 | S4                 | 32.0 | 34.0 |
|     |         |                    | S5                 | 34.0 | 36.0 |
|     |         |                    | S6                 | 36.0 | 38.0 |
|     |         |                    | S4                 | 33.0 | 35.0 |
|     | 5000    | SPMWHT541ML5XAR0S0 | S5                 | 35.0 | 37.0 |
|     |         |                    | S6                 | 37.0 | 39.0 |
|     | 5700    | SPMWHT541ML5XAQ0S0 | S4                 | 32.5 | 34.5 |
|     |         |                    | S5                 | 34.5 | 36.5 |
|     |         |                    | S6                 | 36.5 | 38.5 |
|     |         |                    | S4                 | 32.0 | 34.0 |
|     | 6500    | SPMWHT541ML5XAP0S0 | S5                 | 34.0 | 36.0 |
|     |         |                    | S6                 | 36.0 | 38.0 |

| CRI                  | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|----------------------|---------|--------------------|--------------------|------|------|
|                      |         |                    | Bin                | Min. | Max. |
| 90+                  | 2700    | SPMWHT541ML7XAW0S0 | S1                 | 24.0 | 26.0 |
|                      |         |                    | S2                 | 26.0 | 28.0 |
|                      |         |                    | S3                 | 28.0 | 30.0 |
|                      | 3000    | SPMWHT541ML7XAV0S0 | S1                 | 24.5 | 26.5 |
|                      |         |                    | S2                 | 26.5 | 28.5 |
|                      |         |                    | S3                 | 28.5 | 30.5 |
|                      | 3500    | SPMWHT541ML7XAU0S0 | S1                 | 25.0 | 27.0 |
|                      |         |                    | S2                 | 27.0 | 29.0 |
|                      |         |                    | S3                 | 29.0 | 31.0 |
|                      | 4000    | SPMWHT541ML7XAT0S0 | S1                 | 26.0 | 28.0 |
|                      |         |                    | S2                 | 28.0 | 30.0 |
|                      |         |                    | S3                 | 30.0 | 32.0 |
|                      | 5000    | SPMWHT541ML7XAR0S0 | S1                 | 27.0 | 29.0 |
|                      |         |                    | S2                 | 29.0 | 31.0 |
|                      |         |                    | S3                 | 31.0 | 33.0 |
| 90+ Premium Efficacy | 5700    | SPMWHT541ML7XAQ0S0 | S1                 | 26.5 | 28.5 |
|                      |         |                    | S2                 | 28.5 | 30.5 |
|                      |         |                    | S3                 | 30.5 | 32.5 |
|                      | 6500    | SPMWHT541ML7XAP0S0 | S1                 | 26.0 | 28.0 |
|                      |         |                    | S2                 | 28.0 | 30.0 |
|                      |         |                    | S3                 | 30.0 | 32.0 |
|                      | 2700    | SPMWHT541MT7XAW0S0 | SB                 | 28.0 | 30.0 |
|                      |         |                    | SC                 | 30.0 | 32.0 |
|                      | 3000    | SPMWHT541MT7XAV0S0 | SB                 | 28.0 | 30.0 |
|                      |         |                    | SC                 | 30.0 | 32.0 |
|                      | 3500    | SPMWHT541MT7XAU0S0 | SB                 | 29.0 | 31.0 |
|                      |         |                    | SC                 | 31.0 | 33.0 |
|                      | 4000    | SPMWHT541MT7XAT0S0 | SB                 | 30.0 | 32.0 |
|                      |         |                    | SC                 | 32.0 | 34.0 |
|                      | 5000    | SPMWHT541MT7XAR0S0 | SB                 | 31.0 | 33.0 |
|                      |         |                    | SC                 | 33.0 | 35.0 |
|                      | 5700    | SPMWHT541MT7XAQ0S0 | SB                 | 30.0 | 32.0 |
|                      |         |                    | SC                 | 32.0 | 34.0 |
|                      | 6500    | SPMWHT541MT7XAP0S0 | SB                 | 30.0 | 32.0 |
|                      |         |                    | SC                 | 32.0 | 34.0 |

# Filament LED

Filament LED for decorative and general lighting bulbs

- Customized designs are available per customer request.
- Length: 28, 38, 48, 58, 68mm
- Substrate: Ceramic, Sapphire
- CCT: 2200, 2400, 2700, 3000, 4000, 5000K
- CRI: 80+, 90+



## LF007A

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 90                 | 106  | 10      | Ceramic   | 0          | SPMWHTFM31D523WTFY |
|     |         | 97                 | 113  | 10      | Sapphire  | 0          | SPMWH1FM31D523WTFY |

## LF009A

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 132                | 148  | 10      | Sapphire  | 0          | SPMWHTFM31D545WTKY |
|     |         |                    |      |         |           | -          | SPMWH1FM31D545WTKY |

## LF010A

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 162                | 190  | 15      | Sapphire  | 0          | SPMWHTFM3RD524WTR1 |

## LF310B

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 95                 | 105  | 10      | Ceramic   | -          | SPMWH1FC31D52PWTF2 |

## LF311B

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 100                | 110  | 10      | Ceramic   | -          | SPMWH1FC31D52UWTG1 |

## LF312B

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 110                | 120  | 10      | Ceramic   | -          | SPMWH1FC31D52TWTG1 |

## LF314B

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 130                | 140  | 10      | Ceramic   | -          | SPMWH1FC31D54NWTG1 |

## LF321B

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 200                | 220  | 15      | Ceramic   | -          | SPMWH1FC31D54NWTG1 |

## LF423B

| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 220                | 240  | 20      | Ceramic   | -          | SPMWH1FC42D52TWTU1 |

## LF622B

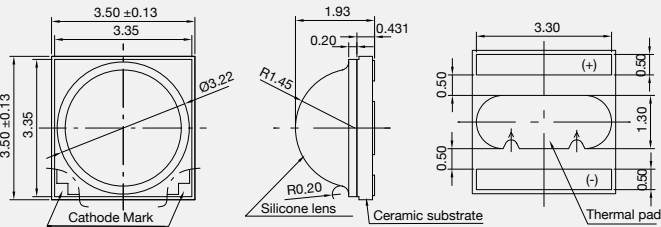
| CRI | CCT (K) | Luminous Flux (lm) |      | IF (mA) | Substrate | 1V Sorting | Part Number        |
|-----|---------|--------------------|------|---------|-----------|------------|--------------------|
|     |         | Min.               | Max. |         |           |            |                    |
| 80+ | 2700    | 210                | 230  | 10      | Ceramic   | -          | SPMWH1FC61D59RWTG2 |

LH351B



Cost effective solution  
for outdoor & directional lighting applications

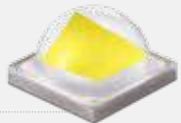
- Operates at a maximum current of up to 1.5A
- High efficacy outdoor solution  
(Delivering set efficacy over 110lm/W @700mA)
- Excellent efficacy: 172lm/W @350mA, 85°C, 4000K
- LM80 Certified @1A, 105°C (Ts) (L90>60,000 @ 1A)
- Footprint: 3.5mm x 3.5mm



[350mA, 85°C]

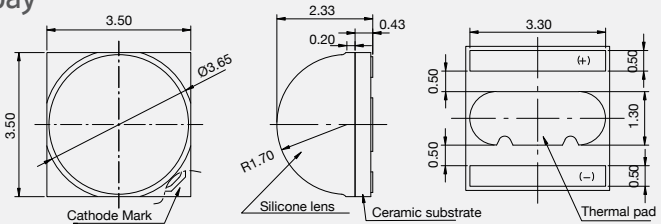
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 2700    | SPHWH2L3D30CD4W0K3 | K1, M1, N1         | 130  | 160  |
|     |         | SPHWH2L3D30CD4W0M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH2L3D30CD4W0N3 | N1, P1, Q1         | 150  | 180  |
|     | 3000    | SPHWH2L3D30CD4V0M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH2L3D30CD4V0N3 | N1, P1, Q1         | 150  | 180  |
|     | 3500    | SPHWH2L3D30CD4U0K3 | K1, M1, N1         | 130  | 160  |
|     |         | SPHWH2L3D30CD4U0M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH2L3D30CD4U0N3 | N1, P1, Q1         | 150  | 180  |
|     | 4000    | SPHWH2L3D30CD4T0N3 | N1, P1, Q1         | 150  | 180  |
|     |         | SPHWH2L3D30CD4T0P3 | P1, Q1, R1         | 160  | 190  |
|     |         | SPHWH2L3D30CD4R1M3 | M1, N1, P1         | 140  | 170  |
|     | 5000    | SPHWH2L3D30CD4R1N3 | N1, P1, Q1         | 150  | 180  |
|     |         | SPHWH2L3D30CD4R1P3 | P1, Q1, R1         | 160  | 190  |
|     |         | SPHWH2L3D30CD4R1Q3 | Q1, R1             | 170  | 190  |
|     | 5700    | SPHWH2L3D30CD4Q1N3 | N1, P1, Q1         | 150  | 180  |
|     |         | SPHWH2L3D30CD4Q1P3 | P1, Q1, R1         | 160  | 190  |
|     | 6500    | SPHWH2L3D30CD4P1M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH2L3D30CD4P1N3 | N1, P1, Q1         | 150  | 180  |
|     |         | SPHWH2L3D30CD4P1P3 | P1, Q1, R1         | 160  | 190  |
| 75+ | 5000    | SPHWH1L3D30DD4R1M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH1L3D30DD4R1N3 | N1, P1, Q1         | 150  | 180  |
|     |         | SPHWH1L3D30DD4R1P3 | P1, Q1, R1         | 160  | 190  |
|     | 5700    | SPHWH1L3D30DD4Q1M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH1L3D30DD4Q1N3 | N1, P1, Q1         | 150  | 180  |
|     |         | SPHWH1L3D30DD4Q1P3 | P1, Q1, R1         | 160  | 190  |
| 80+ | 2200    | SPHWH2L3D30ED4Y0G3 | G1, H1, J1         | 100  | 130  |
|     |         | SPHWH2L3D30ED4W0J3 | J1, K1, M1         | 120  | 150  |
|     | 2700    | SPHWH2L3D30ED4W0K3 | K1, M1, N1         | 130  | 160  |
|     |         | SPHWH2L3D30ED4V0J3 | J1, K1, M1         | 120  | 150  |
|     | 3000    | SPHWH2L3D30ED4V0K3 | K1, M1, N1         | 130  | 160  |
|     |         | SPHWH2L3D30ED4V0M3 | M1, N1, P1         | 140  | 170  |
|     | 3500    | SPHWH2L3D30ED4U0K3 | K1, M1, N1         | 130  | 160  |
|     |         | SPHWH2L3D30ED4U0M3 | M1, N1, P1         | 140  | 170  |
|     | 4000    | SPHWH2L3D30ED4T0K3 | K1, M1, N1         | 130  | 160  |
|     |         | SPHWH2L3D30ED4T0M3 | M1, N1, P1         | 140  | 170  |
|     | 5000    | SPHWH2L3D30ED4R1M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH2L3D30ED4R1N3 | N1, P1, Q1         | 150  | 180  |
|     | 5700    | SPHWH2L3D30ED4Q1M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH2L3D30ED4P0K3 | K1, M1, N1         | 130  | 160  |
|     | 6000    | SPHWH2L3D30ED4P0M3 | M1, N1, P1         | 140  | 170  |
|     |         | SPHWH2L3D30ED4P1K3 | K1, M1, N1         | 130  | 160  |
|     | 6500    | SPHWH2L3D30ED4P1M3 | M1, N1, P1         | 140  | 170  |

LH351C



High performance suitable for street, high/low bay  
& stadium/arena lighting applications

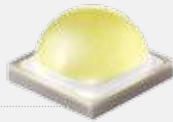
- Operates at a maximum current of up to 2.0 A
- High efficacy outdoor solution  
(Delivering set efficacy over 120lm/W @700mA)
- Excellent efficacy: 160lm/W @700mA, 85°C
- Footprint: 3.5mm x 3.5mm



[700mA, 85°C]

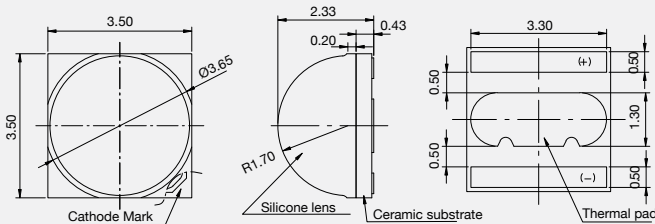
| CRI | CCT (K) | Part Number         | Luminous Flux (lm) |      |      |
|-----|---------|---------------------|--------------------|------|------|
|     |         |                     | Bin                | Min. | Max. |
| 70+ | 2700    | SPHWHTL3D50CE4W0MF  | MB, NB, PB         | 250  | 310  |
|     |         | SPHWHTL3D50CE4W0NF  | NB, PB, QB         | 270  | 330  |
|     | 3000    | SPHWHTL3D50CE4V0NF  | NB, PB, QB         | 270  | 330  |
|     |         | SPHWHTL3D50CE4V0PF  | PB, QB, RB         | 290  | 350  |
|     | 3500    | SPHWHTL3D50CE4U0PF  | PB, QB, RB         | 290  | 350  |
|     |         | SPHWHTL3D50CE4U0QF  | QB, RB, SB         | 310  | 370  |
|     | 4000    | SPHWHTL3D50CE4T0PF  | PB, QB, RB         | 290  | 350  |
|     |         | SPHWHTL3D50CE4T0QF  | QB, RB, SB         | 310  | 370  |
|     | 5000    | SPHWHTL3D50CE4R1PF  | PB, QB, RB         | 290  | 350  |
|     |         | SPHWHTL3D50CE4R1QF  | QB, RB, SB         | 310  | 370  |
|     | 5700    | SPHWHTL3D50CE4Q1PF  | PB, QB, RB         | 310  | 370  |
|     |         | SPHWHTL3D50CE4Q1QF  | QB, RB, SB         | 310  | 370  |
| 80+ | 6500    | SPHWHTL3D50CE4P1PF  | PB, QB, RB         | 290  | 350  |
|     |         | SPHWHTL3D50CE4P1QF  | QB, RB, SB         | 310  | 370  |
|     | 2700    | SPHWHTL3D50EE4W0MF  | MB, NB, PB         | 250  | 310  |
|     |         | SPHWHTL3D50EE4V0NF  | NB, PB, QB         | 270  | 330  |
|     | 3500    | SPHWHTL3D50EE4U0NF  | NB, PB, QB         | 270  | 330  |
|     |         | SPHWHTL3D50EE4T0MF  | MB, NB, PB         | 250  | 310  |
|     | 4000    | SPHWHTL3D50EE4T0NF  | NB, PB, QB         | 270  | 330  |
|     |         | SPHWHTL3D50EE4R1TNF | NB, PB, QB         | 270  | 330  |
|     | 5000    | SPHWHTL3D50EE4R1TF  | PB, QB, RB         | 290  | 350  |
|     |         | SPHWHTL3D50EE4Q1TNF | NB, PB, QB         | 270  | 330  |
|     | 5700    | SPHWHTL3D50GE4W0HF  | HB, JB, KB         | 190  | 250  |
|     |         | SPHWHTL3D50GE4W0JF  | JB, KB, MB         | 210  | 270  |
| 90+ | 3000    | SPHWHTL3D50GE4V0JF  | JB, KB, MB         | 210  | 270  |
|     |         | SPHWHTL3D50GE4U0KF  | KB, MB, NB         | 230  | 290  |
|     | 3500    | SPHWHTL3D50GE4U0JF  | JB, KB, MB         | 210  | 270  |
|     |         | SPHWHTL3D50GE4T0KF  | KB, MB, NB         | 230  | 290  |
|     | 4000    | SPHWHTL3D50GE4T0JF  | JB, KB, MB         | 210  | 270  |
|     |         | SPHWHTL3D50GE4T0KF  | KB, MB, NB         | 230  | 290  |
|     | 5000    | SPHWHTL3D50GE4R1TKF | KB, MB, NB         | 230  | 290  |
|     |         | SPHWHTL3D50GE4R1TMF | MB, NB, PB         | 250  | 310  |

LH351D



Best solution for high lumen output:  
street & stadium/arena lighting applications

- Operates at a maximum current of up to 3.0A
- High efficacy outdoor solution  
(Delivering set efficacy over 120lm/W @1050mA)
- Higher TLCI value with CRI90 line-up for broadcast use  
(Stadium/Arena lighting)
- Footprint: 3.5mm x 3.5mm

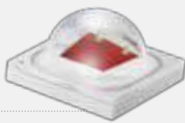


[1050mA, 85°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 70+ | 2700    | SPHWHTL3DAOCF4W0S6 | S2, T2, U2         | 380  | 440  |
|     |         | SPHWHTL3DAOCF4W0T6 | T2, U2, V2         | 400  | 460  |
|     |         | SPHWHTL3DAOCF4V0T6 | T2, U2, V2         | 400  | 460  |
|     | 3000    | SPHWHTL3DAOCF4V0U6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOCF4V0V6 | V2, W2, Y2         | 440  | 500  |
|     |         | SPHWHTL3DAOCF4V0W6 | W2, Y2, Z2         | 460  | 520  |
|     | 3500    | SPHWHTL3DAOCF4U0T6 | T2, U2, V2         | 400  | 460  |
|     |         | SPHWHTL3DAOCF4U0U6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOCF4U0V6 | V2, W2, Y2         | 440  | 500  |
|     | 4000    | SPHWHTL3DAOCF4U0W6 | W2, Y2, Z2         | 460  | 520  |
|     |         | SPHWHTL3DAOCF4T0U6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOCF4T0V6 | V2, W2, Y2         | 440  | 500  |
|     | 5000    | SPHWHTL3DAOCF4T0W6 | W2, Y2, Z2         | 460  | 520  |
|     |         | SPHWHTL3DAOCF4T0Y6 | Y2, Z2, I2         | 480  | 540  |
|     |         | SPHWHTL3DAOCF4RTV6 | V2, W2, Y2         | 440  | 500  |
|     | 5700    | SPHWHTL3DAOCF4RTW6 | W2, Y2, Z2         | 460  | 520  |
|     |         | SPHWHTL3DAOCF4RTY6 | Y2, Z2, I2         | 480  | 540  |
|     |         | SPHWHTL3DAOCF4RTZ6 | Z2, I2, Z2         | 500  | 560  |
|     | 6500    | SPHWHTL3DAOCF4QTV6 | V2, W2, Y2         | 440  | 500  |
|     |         | SPHWHTL3DAOCF4QTW6 | W2, Y2, Z2         | 460  | 520  |
|     |         | SPHWHTL3DAOCF4QTY6 | Y2, Z2, I2         | 480  | 540  |
| 80+ | 2700    | SPHWHTL3DAOCF4PTU6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOCF4PTV6 | V2, W2, Y2         | 440  | 500  |
|     |         | SPHWHTL3DAOCF4PTW6 | W2, Y2, Z2         | 460  | 520  |
|     | 3000    | SPHWHTL3DAOCF4PTU6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOCF4PTV6 | V2, W2, Y2         | 440  | 500  |
|     |         | SPHWHTL3DAOCF4PTW6 | W2, Y2, Z2         | 460  | 520  |
|     | 3500    | SPHWHTL3DAOCF4PTU6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOCF4PTV6 | V2, W2, Y2         | 440  | 500  |
|     |         | SPHWHTL3DAOCF4PTW6 | W2, Y2, Z2         | 460  | 520  |
|     | 4000    | SPHWHTL3DAOEF4W0Q6 | Q2, R2, S2         | 340  | 400  |
|     |         | SPHWHTL3DAOEF4W0R6 | R2, S2, T2         | 360  | 420  |
|     |         | SPHWHTL3DAOEF4V0R6 | R2, S2, T2         | 360  | 420  |

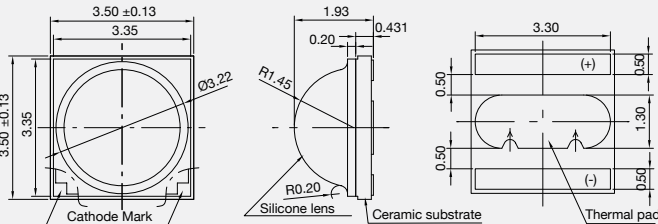
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Max. |
| 80+ | 5300    | SPHWHTL3DAOEF4QRT6 | T2, U2, V2         | 400  | 460  |
|     |         | SPHWHTL3DAOEF4QRU6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOEF4QTT6 | T2, U2, V2         | 400  | 460  |
|     | 5700    | SPHWHTL3DAOEF4QTU6 | U2, V2, W2         | 420  | 480  |
|     |         | SPHWHTL3DAOEF4PQT6 | T2, U2, V2         | 400  | 460  |
|     |         | SPHWHTL3DAOEF4PQU6 | U2, V2, W2         | 420  | 480  |
|     | 6000    | SPHWHTL3DAOEF4PTT6 | T2, U2, V2         | 400  | 460  |
|     |         | SPHWHTL3DAOEF4PTU6 | U2, V2, W2         | 420  | 480  |
|     | 6500    | SPHWHTL3DAOGF4W0M6 | M2, N2, P2         | 280  | 340  |
|     |         | SPHWHTL3DAOGF4W0N6 | N2, P2, Q2         | 300  | 360  |
|     |         | SPHWHTL3DAOGF4V0N6 | N2, P2, Q2         | 300  | 360  |
|     | 3000    | SPHWHTL3DAOGF4V0P6 | P2, Q2, R2         | 320  | 380  |
| 90+ | 3500    | SPHWHTL3DAOGF4U0N6 | N2, P2, Q2         | 300  | 360  |
|     |         | SPHWHTL3DAOGF4U0P6 | P2, Q2, R2         | 320  | 380  |
|     |         | SPHWHTL3DAOGF4T0P6 | P2, Q2, R2         | 320  | 380  |
|     | 4000    | SPHWHTL3DAOGF4T0Q6 | Q2, R2, S2         | 340  | 400  |
|     |         | SPHWHTL3DAOGF4RTR6 | R2, S2, T2         | 360  | 420  |
|     |         | SPHWHTL3DAOGF4RTS6 | S2, T2, U2         | 380  | 440  |
|     | 5000    | SPHWHTL3DAOGF4PQR6 | R2, S2, T2         | 360  | 420  |
|     |         | SPHWHTL3DAOGF4PQS6 | S2, T2, U2         | 380  | 440  |
|     | 6000    | SPHWHTL3DAOGF4PQR6 | R2, S2, T2         | 360  | 420  |
|     |         | SPHWHTL3DAOGF4PQS6 | S2, T2, U2         | 380  | 440  |
|     |         | SPHWHTL3DAOGF4PQS6 | S2, T2, U2         | 380  | 440  |

LH351H Deep Red



Red color high power LEDs for horticulture  
lighting and signage applications

- Red color - 660nm
- Footprint: 3.5mm x 3.5mm (Compatible with LH351B)



[350mA, 25°C]

| Color    | Wavelength (nm) | Part Number        | Optical power Typ. (mW) | PPF* Typ. (μmol/s) | PPF/W Typ. (μmol/J) |
|----------|-----------------|--------------------|-------------------------|--------------------|---------------------|
| Deep Red | 660             | SPHRD1L3DH00A4R2D2 | 425                     | 2.4                | 3.11                |

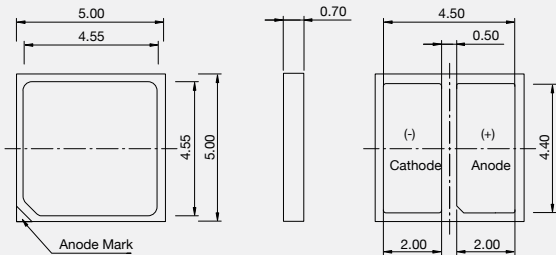
\* Photosynthetic Photon Flux

LH508B



Designed for best lm/\$ with high luminous flux

- Hybrid solution mixing mid and high power LED
- EMC mold resin for high reliability
- Suitable for street light, high/low bay light & spot light
- Design flexible footprint: 5.0mm × 5.0mm



[600mA, 25°C]

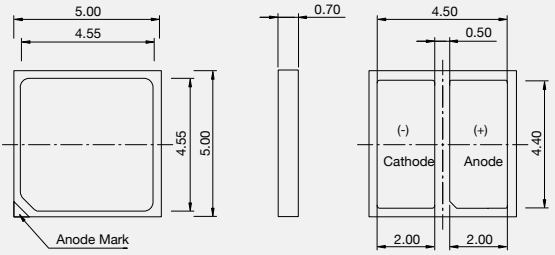
| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Typ. |
| 80+ | 2700    | SPHWH1L5N505YEW5A1 | A1                 | 460  | 502  |
|     | 3000    | SPHWH1L5N505YEV5A1 | A1                 | 460  | 513  |
|     | 4000    | SPHWH1L5N505YET5A1 | A1                 | 500  | 545  |
|     | 5000    | SPHWH1L5N505YER5A1 | A1                 | 500  | 545  |
|     | 5700    | SPHWH1L5N505YEQ5A1 | A1                 | 500  | 540  |
|     | 6500    | SPHWH1L5N505YEP5A1 | A1                 | 500  | 535  |

LH508A Plus



Designed for best lm/\$ with high luminous flux

- EMC mold resin for high reliability
- Suitable for street light, high/low bay light & spot light
- Design flexible footprint: 5.0mm × 5.0mm



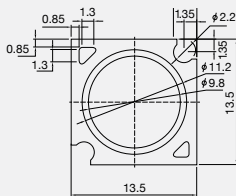
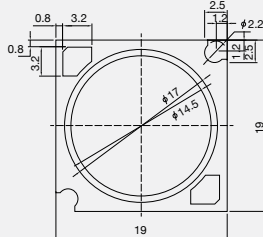
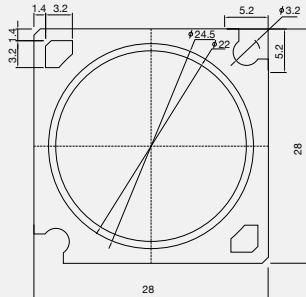
[640mA, 25°C]

| CRI | CCT (K) | Part Number        | Luminous Flux (lm) |      |      |
|-----|---------|--------------------|--------------------|------|------|
|     |         |                    | Bin                | Min. | Typ. |
| 70+ | 2700    | SPHWH1L5N603YEW5A1 | A1                 | 540  | 600  |
|     | 3000    | SPHWH1L5N603YEV5A1 | A1                 | 540  | 620  |
|     | 4000    | SPHWH1L5N603YET5A1 | A1                 | 580  | 650  |
|     | 5000    | SPHWH1L5N603YER5A1 | A1                 | 580  | 650  |
|     | 5700    | SPHWH1L5N603YEQ5A1 | A1                 | 580  | 650  |
|     | 6500    | SPHWH1L5N603YEP5A1 | A1                 | 540  | 620  |
| 80+ | 2700    | SPHWH1L5N605YEW5A1 | A1                 | 500  | 560  |
|     | 3000    | SPHWH1L5N605YEV5A1 | A1                 | 500  | 580  |
|     | 3500    | SPHWH1L5N605YEU5A1 | A1                 | 500  | 590  |
|     | 4000    | SPHWH1L5N605YET5A1 | A1                 | 540  | 610  |
|     | 5000    | SPHWH1L5N605YER5A1 | A1                 | 540  | 610  |
|     | 5700    | SPHWH1L5N605YEQ5A1 | A1                 | 540  | 610  |
|     | 6500    | SPHWH1L5N605YEP5A1 | A1                 | 500  | 590  |

D-series Gen 3

Full line-up for various applications: MR/PAR, spotlights, downlights & high bay lights

- Industry-leading light efficacy in COB lineups
- Better thermal resistance than Gen 2
- High reliability satisfying DLC Premium standards
- Completed 6,000 hours of LM-80 testing

| T <sub>J</sub> =85°C | LC003D<br>Gen 3                                                                     | LC006D<br>Gen 3   | LC009D<br>Gen 3   | LC013D<br>Gen 3                                                                     | LC016D<br>Gen 3    | LC019D<br>Gen 3    | LC026D<br>Gen 3                                                                       | LC033D<br>Gen 3    | LC040D<br>Gen 3     | LC060D<br>Gen 3     | LC080D<br>Gen 3     |
|----------------------|-------------------------------------------------------------------------------------|-------------------|-------------------|-------------------------------------------------------------------------------------|--------------------|--------------------|---------------------------------------------------------------------------------------|--------------------|---------------------|---------------------|---------------------|
|                      |   |                   |                   |   |                    |                    |   |                    |                     |                     |                     |
| LES                  | 9.8mm                                                                               |                   |                   | 14.5mm                                                                              |                    |                    | 22 mm                                                                                 |                    |                     |                     |                     |
| Typical              | 33.8V                                                                               |                   |                   |                                                                                     |                    |                    |                                                                                       |                    |                     | 50.7V               |                     |
|                      | 3.0W<br>(90 mA)                                                                     | 6.1W<br>(180 mA)  | 9.1W<br>(270 mA)  | 12.2W<br>(360 mA)                                                                   | 15.2W<br>(450 mA)  | 18.3W<br>(540 mA)  | 24.3W<br>(720 mA)                                                                     | 30.4W<br>(900 mA)  | 36.5W<br>(1080 mA)  | 54.8W<br>(1080 mA)  | 82.1W<br>(1620 mA)  |
| Max.                 | 8.7W<br>(230 mA)                                                                    | 17.4W<br>(460 mA) | 26.1W<br>(690 mA) | 34.8W<br>(920 mA)                                                                   | 43.5W<br>(1150 mA) | 52.2W<br>(1380 mA) | 69.6W<br>(1840 mA)                                                                    | 86.9W<br>(2300 mA) | 104.3W<br>(2760 mA) | 152.9W<br>(2760 mA) | 229.3W<br>(4140 mA) |
| Dimension            |  |                   |                   |  |                    |                    |  |                    |                     |                     |                     |
| Size                 | 13.5mm x 13.5mm                                                                     |                   |                   | 19mm x 19mm                                                                         |                    |                    | 28mm x 28mm                                                                           |                    |                     |                     |                     |

| Product                                                                                               | CRI  | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-------------------------------------------------------------------------------------------------------|------|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                       |      |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC003D Gen 3   | 80+  | 2700          | MacAdam 2step     | SPHWAHDNA25YZW2D3 | 475                        | 156                              | 90mA<br>33.8V                             |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNA25YZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000          | MacAdam 2step     | SPHWAHDNA25YZV2D3 | 499                        | 164                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNA25YZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500          | MacAdam 2step     | SPHWAHDNA25YZU2D3 | 514                        | 169                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNA25YZU3D3 |                            |                                  |                                           |
|                                                                                                       |      | 4000          | MacAdam 2step     | SPHWAHDNA25YZT2D3 | 524                        | 172                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNA25YZT3D3 |                            |                                  |                                           |
|                                                                                                       | 5000 | MacAdam 3step | SPHWAHDNA25YZR3D3 | 529               | 174                        |                                  |                                           |
|                                                                                                       | 5700 | MacAdam 3step | SPHWAHDNA25YZQ3D3 | 529               | 174                        |                                  |                                           |
|                                                                                                       | 6500 | MacAdam 3step | SPHWAHDNA25YZP3D3 | 524               | 172                        |                                  |                                           |
|                                                                                                       | 90+  | 2700          | MacAdam 2step     | SPHWAHDNA27YZW2D3 | 407                        | 134                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNA27YZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000          | MacAdam 2step     | SPHWAHDNA27YZV2D3 | 428                        | 141                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNA27YZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500          | MacAdam 2step     | SPHWAHDNA27YZU2D3 | 441                        | 145                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNA27YZU3D3 |                            |                                  |                                           |
| 4000                                                                                                  |      | MacAdam 2step | SPHWAHDNA27YZT2D3 | 450               | 148                        |                                  |                                           |
|                                                                                                       |      | MacAdam 3step | SPHWAHDNA27YZT3D3 |                   |                            |                                  |                                           |
| 5000                                                                                                  |      | MacAdam 3step | SPHWAHDNA27YZR3D3 | 453               | 149                        |                                  |                                           |
| <br>LC006D Gen 3 | 80+  | 2700          | MacAdam 2step     | SPHWAHDNB25YZW2D3 | 946                        | 155                              | 180mA<br>33.8V                            |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNB25YZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000          | MacAdam 2step     | SPHWAHDNB25YZV2D3 | 994                        | 163                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNB25YZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500          | MacAdam 2step     | SPHWAHDNB25YZU2D3 | 1023                       | 168                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNB25YZU3D3 |                            |                                  |                                           |
|                                                                                                       |      | 4000          | MacAdam 2step     | SPHWAHDNB25YZT2D3 | 1043                       | 171                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNB25YZT3D3 |                            |                                  |                                           |
|                                                                                                       | 5000 | MacAdam 3step | SPHWAHDNB25YZR3D3 | 1052              | 173                        |                                  |                                           |
|                                                                                                       | 5700 | MacAdam 3step | SPHWAHDNB25YZQ3D3 | 1052              | 173                        |                                  |                                           |
|                                                                                                       | 6500 | MacAdam 3step | SPHWAHDNB25YZP3D3 | 1043              | 171                        |                                  |                                           |
|                                                                                                       | 90+  | 2700          | MacAdam 2step     | SPHWAHDNB27YZW2D3 | 809                        | 133                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNB27YZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000          | MacAdam 2step     | SPHWAHDNB27YZV2D3 | 851                        | 140                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNB27YZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500          | MacAdam 2step     | SPHWAHDNB27YZU2D3 | 877                        | 144                              |                                           |
|                                                                                                       |      |               | MacAdam 3step     | SPHWAHDNB27YZU3D3 |                            |                                  |                                           |
| 4000                                                                                                  |      | MacAdam 2step | SPHWAHDNB27YZT2D3 | 895               | 147                        |                                  |                                           |
|                                                                                                       |      | MacAdam 3step | SPHWAHDNB27YZT3D3 |                   |                            |                                  |                                           |
| 5000                                                                                                  |      | MacAdam 3step | SPHWAHDNB27YZR3D3 | 902               | 148                        |                                  |                                           |

Chip-on-Board LEDs

Component

| Product                                                                                           | CRI                                                                                                 | CCT (K) | Color rank    | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |      |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|------|
|                                                                                                   |                                                                                                     |         |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |      |
| <br>LC009D Gen 3 | 70+                                                                                                 | 3000    | MacAdam 3step | SPHWAHDNC23YZV3D3 | 1594                       | 174                              | 270mA<br>33.8V                            |      |
|                                                                                                   |                                                                                                     | 4000    | MacAdam 3step | SPHWAHDNC23Yzt3D3 | 1624                       | 177                              |                                           |      |
|                                                                                                   |                                                                                                     | 5000    | MacAdam 3step | SPHWAHDNC23YzR3D3 | 1653                       | 180                              |                                           |      |
|                                                                                                   | 80+                                                                                                 | 2700    | MacAdam 2step | SPHWAHDNC25YZW2D3 | 1405                       | 154                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC25YZW3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 3000    | MacAdam 2step | SPHWAHDNC25YZV2D3 | 1476                       | 162                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC25YZV3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 3500    | MacAdam 2step | SPHWAHDNC25YzU2D3 | 1519                       | 166                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC25YzU3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 4000    | MacAdam 2step | SPHWAHDNC25Yzt2D3 | 1550                       | 170                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC25Yzt3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 5000    | MacAdam 3step | SPHWAHDNC25YzR3D3 | 1563                       | 171                              |                                           |      |
|                                                                                                   |                                                                                                     | 5700    | MacAdam 3step | SPHWAHDNC25YzQ3D3 | 1563                       | 171                              |                                           |      |
|                                                                                                   |                                                                                                     | 6500    | MacAdam 3step | SPHWAHDNC25YzP3D3 | 1550                       | 170                              |                                           |      |
|                                                                                                   |                                                                                                     | 90+     | 2700          | MacAdam 2step     | SPHWAHDNC27YZW2D3          | 1202                             |                                           | 132  |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC27YZW3D3 |                            |                                  |                                           |      |
|                                                                                                   | 3000                                                                                                |         | MacAdam 2step | SPHWAHDNC27YZV2D3 | 1264                       | 139                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC27YZV3D3 |                            |                                  |                                           |      |
|                                                                                                   | 3500                                                                                                |         | MacAdam 2step | SPHWAHDNC27YzU2D3 | 1302                       | 143                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC27YzU3D3 |                            |                                  |                                           |      |
|                                                                                                   | 4000                                                                                                |         | MacAdam 2step | SPHWAHDNC27Yzt2D3 | 1329                       | 146                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDNC27Yzt3D3 |                            |                                  |                                           |      |
|                                                                                                   | 5000                                                                                                |         | MacAdam 3step | SPHWAHDNC27YzR3D3 | 1340                       | 147                              |                                           |      |
|                                                                                                   | <br>LC013D Gen 3 |         | 70+           | 3000              | MacAdam 3step              | SPHWAHDND23YZV3D3                |                                           | 2094 |
| 4000                                                                                              |                                                                                                     |         |               | MacAdam 3step     | SPHWAHDND23Yzt3D3          | 2133                             | 174                                       |      |
| 5000                                                                                              |                                                                                                     |         |               | MacAdam 3step     | SPHWAHDND23YzR3D3          | 2171                             | 177                                       |      |
| 80+                                                                                               |                                                                                                     | 2700    | MacAdam 2step | SPHWAHDND35YZW2D3 | 1845                       | 152                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND35YZW3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 3000    | MacAdam 2step | SPHWAHDND35YZV2D3 | 1939                       | 159                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND35YZV3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 3500    | MacAdam 2step | SPHWAHDND35YzU2D3 | 1996                       | 164                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND35YzU3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 4000    | MacAdam 2step | SPHWAHDND35Yzt2D3 | 2036                       | 167                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND35Yzt3D3 |                            |                                  |                                           |      |
|                                                                                                   |                                                                                                     | 5000    | MacAdam 3step | SPHWAHDND35YzR3D3 | 2053                       | 169                              |                                           |      |
|                                                                                                   |                                                                                                     | 5700    | MacAdam 3step | SPHWAHDND35YzQ3D3 | 2053                       | 169                              |                                           |      |
|                                                                                                   |                                                                                                     | 6500    | MacAdam 3step | SPHWAHDND35YzP3D3 | 2036                       | 167                              |                                           |      |
|                                                                                                   |                                                                                                     | 90+     | 2700          | MacAdam 2step     | SPHWAHDND37YZW2D3          | 1579                             | 130                                       |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND37YZW3D3 |                            |                                  |                                           |      |
| 3000                                                                                              |                                                                                                     |         | MacAdam 2step | SPHWAHDND37YZV2D3 | 1661                       | 137                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND37YZV3D3 |                            |                                  |                                           |      |
| 3500                                                                                              |                                                                                                     |         | MacAdam 2step | SPHWAHDND37YzU2D3 | 1710                       | 141                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND37YzU3D3 |                            |                                  |                                           |      |
| 4000                                                                                              |                                                                                                     |         | MacAdam 2step | SPHWAHDND37Yzt2D3 | 1745                       | 143                              |                                           |      |
|                                                                                                   |                                                                                                     |         | MacAdam 3step | SPHWAHDND37Yzt3D3 |                            |                                  |                                           |      |
| 5000                                                                                              |                                                                                                     |         | MacAdam 3step | SPHWAHDND37YzR3D3 | 1760                       | 145                              |                                           |      |

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Component

| Product                                                                                             | CRI           | CCT (K)                                                                                               | Color rank    | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-----------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                     |               |                                                                                                       |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC016D Gen 3 | 70+           | 3000                                                                                                  | MacAdam 3step | SPHWAHDNE23YZV3D3 | 2697                       | 176                              | 450mA<br>33.8V                            |
|                                                                                                     |               | 4000                                                                                                  | MacAdam 3step | SPHWAHDNE23Yzt3D3 | 2747                       | 180                              |                                           |
|                                                                                                     |               | 5000                                                                                                  | MacAdam 3step | SPHWAHDNE23YzR3D3 | 2797                       | 183                              |                                           |
|                                                                                                     | 80+           | 2700                                                                                                  | MacAdam 2step | SPHWAHDNE25YZW2D3 | 2376                       | 156                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE25YZW3D3 |                            |                                  |                                           |
|                                                                                                     |               | 3000                                                                                                  | MacAdam 2step | SPHWAHDNE25YZV2D3 | 2497                       | 164                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE25YZV3D3 |                            |                                  |                                           |
|                                                                                                     |               | 3500                                                                                                  | MacAdam 2step | SPHWAHDNE25YzU2D3 | 2570                       | 169                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE25YzU3D3 |                            |                                  |                                           |
|                                                                                                     |               | 4000                                                                                                  | MacAdam 2step | SPHWAHDNE25Yzt2D3 | 2622                       | 172                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE25Yzt3D3 |                            |                                  |                                           |
|                                                                                                     |               | 5000                                                                                                  | MacAdam 3step | SPHWAHDNE25YzR3D3 | 2644                       | 174                              |                                           |
|                                                                                                     |               | 5700                                                                                                  | MacAdam 3step | SPHWAHDNE25YzQ3D3 | 2644                       | 174                              |                                           |
|                                                                                                     |               | 6500                                                                                                  | MacAdam 3step | SPHWAHDNE25YzP3D3 | 2622                       | 172                              |                                           |
|                                                                                                     | 90+           | 2700                                                                                                  | MacAdam 2step | SPHWAHDNE27YZW2D3 | 2033                       | 134                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE27YZW3D3 |                            |                                  |                                           |
|                                                                                                     |               | 3000                                                                                                  | MacAdam 2step | SPHWAHDNE27YZV2D3 | 2139                       | 141                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE27YZV3D3 |                            |                                  |                                           |
|                                                                                                     |               | 3500                                                                                                  | MacAdam 2step | SPHWAHDNE27YzU2D3 | 2203                       | 145                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE27YzU3D3 |                            |                                  |                                           |
|                                                                                                     |               | 4000                                                                                                  | MacAdam 2step | SPHWAHDNE27Yzt2D3 | 2248                       | 148                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNE27Yzt3D3 |                            |                                  |                                           |
|                                                                                                     |               | 5000                                                                                                  | MacAdam 3step | SPHWAHDNE27YzR3D3 | 2267                       | 149                              |                                           |
|                                                                                                     |               | <br>LC019D Gen 3 | 70+           | 3000              | MacAdam 3step              | SPHWAHDNF23YZV3D3                |                                           |
| 4000                                                                                                | MacAdam 3step |                                                                                                       |               | SPHWAHDNF23Yzt3D3 | 3280                       | 179                              |                                           |
| 5000                                                                                                | MacAdam 3step |                                                                                                       |               | SPHWAHDNF23YzR3D3 | 3339                       | 182                              |                                           |
| 80+                                                                                                 | 2700          |                                                                                                       | MacAdam 2step | SPHWAHDNF25YZW2D3 | 2837                       | 155                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF25YZW3D3 |                            |                                  |                                           |
|                                                                                                     | 3000          |                                                                                                       | MacAdam 2step | SPHWAHDNF25YZV2D3 | 2982                       | 163                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF25YZV3D3 |                            |                                  |                                           |
|                                                                                                     | 3500          |                                                                                                       | MacAdam 2step | SPHWAHDNF25YzU2D3 | 3069                       | 168                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF25YzU3D3 |                            |                                  |                                           |
|                                                                                                     | 4000          |                                                                                                       | MacAdam 2step | SPHWAHDNF25Yzt2D3 | 3130                       | 171                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF25Yzt3D3 |                            |                                  |                                           |
|                                                                                                     | 5000          |                                                                                                       | MacAdam 3step | SPHWAHDNF25YzR3D3 | 3157                       | 173                              |                                           |
|                                                                                                     | 5700          |                                                                                                       | MacAdam 3step | SPHWAHDNF25YzQ3D3 | 3157                       | 173                              |                                           |
|                                                                                                     | 6500          |                                                                                                       | MacAdam 3step | SPHWAHDNF25YzP3D3 | 3130                       | 171                              |                                           |
| 90+                                                                                                 | 2700          |                                                                                                       | MacAdam 2step | SPHWAHDNF27YZW2D3 | 2428                       | 133                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF27YZW3D3 |                            |                                  |                                           |
|                                                                                                     | 3000          |                                                                                                       | MacAdam 2step | SPHWAHDNF27YZV2D3 | 2554                       | 140                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF27YZV3D3 |                            |                                  |                                           |
|                                                                                                     | 3500          |                                                                                                       | MacAdam 2step | SPHWAHDNF27YzU2D3 | 2630                       | 144                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF27YzU3D3 |                            |                                  |                                           |
|                                                                                                     | 4000          |                                                                                                       | MacAdam 2step | SPHWAHDNF27Yzt2D3 | 2684                       | 147                              |                                           |
|                                                                                                     |               |                                                                                                       | MacAdam 3step | SPHWAHDNF27Yzt3D3 |                            |                                  |                                           |
|                                                                                                     | 5000          |                                                                                                       | MacAdam 3step | SPHWAHDNF27YzR3D3 | 2707                       | 148                              |                                           |

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Component

| Product                                                                                             | CRI  | CCT (K) | Color rank    | Part Number       | T <sub>j</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-----------------------------------------------------------------------------------------------------|------|---------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                     |      |         |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC026D Gen 3   | 70+  | 3000    | MacAdam 3step | SPHWAHDNG23YZV3D3 | 4230                       | 174                              | 720mA<br>33.8V                            |
|                                                                                                     |      | 4000    | MacAdam 3step | SPHWAHDNG23YZT3D3 | 4308                       | 177                              |                                           |
|                                                                                                     |      | 5000    | MacAdam 3step | SPHWAHDNG23YZR3D3 | 4387                       | 180                              |                                           |
|                                                                                                     | 80+  | 2700    | MacAdam 2step | SPHWAHDNG25YZW2D3 | 3727                       | 153                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNG25YZW3D3 |                            |                                  |                                           |
|                                                                                                     |      | 3000    | MacAdam 2step | SPHWAHDNG25YZV2D3 | 3917                       | 161                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNG25YZV3D3 |                            |                                  |                                           |
|                                                                                                     |      | 3500    | MacAdam 2step | SPHWAHDNG25YZU2D3 | 4032                       | 166                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNG25YZU3D3 |                            |                                  |                                           |
|                                                                                                     |      | 4000    | MacAdam 2step | SPHWAHDNG25YZT2D3 | 4112                       | 169                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNG25YZT3D3 |                            |                                  |                                           |
|                                                                                                     |      | 5000    | MacAdam 3step | SPHWAHDNG25YZR3D3 | 4147                       | 170                              |                                           |
|                                                                                                     |      | 5700    | MacAdam 3step | SPHWAHDNG25YZQ3D3 | 4147                       | 170                              |                                           |
|                                                                                                     |      | 6500    | MacAdam 3step | SPHWAHDNG25YZP3D3 | 4112                       | 169                              |                                           |
|                                                                                                     | 90+  | 2700    | MacAdam 2step | SPHWAHDNG27YZW2D3 | 3190                       | 131                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNG27YZW3D3 |                            |                                  |                                           |
|                                                                                                     |      | 3000    | MacAdam 2step | SPHWAHDNG27YZV2D3 | 3355                       | 138                              |                                           |
| <br>LC033D Gen 3 | 90+  |         | MacAdam 3step | SPHWAHDNG27YZV3D3 |                            |                                  | 900mA<br>33.8V                            |
|                                                                                                     |      | 3500    | MacAdam 2step | SPHWAHDNG27YZU2D3 | 3455                       | 142                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNG27YZU3D3 |                            |                                  |                                           |
|                                                                                                     | 80+  | 4000    | MacAdam 2step | SPHWAHDNG27YZT2D3 | 3526                       | 145                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNG27YZT3D3 |                            |                                  |                                           |
|                                                                                                     |      | 5000    | MacAdam 3step | SPHWAHDNG27YZR3D3 | 3556                       | 146                              |                                           |
|                                                                                                     | 70+  | 3000    | MacAdam 3step | SPHWAHDNH23YZV3D3 | 5235                       | 172                              |                                           |
|                                                                                                     |      | 4000    | MacAdam 3step | SPHWAHDNH23YZT3D3 | 5332                       | 175                              |                                           |
|                                                                                                     |      | 5000    | MacAdam 3step | SPHWAHDNH23YZR3D3 | 5429                       | 178                              |                                           |
|                                                                                                     | 2700 |         | MacAdam 2step | SPHWAHDNH25YZW2D3 | 4612                       | 152                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH25YZW3D3 |                            |                                  |                                           |
|                                                                                                     |      | 3000    | MacAdam 2step | SPHWAHDNH25YZV2D3 | 4847                       | 159                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH25YZV3D3 |                            |                                  |                                           |
|                                                                                                     | 3500 |         | MacAdam 2step | SPHWAHDNH25YZU2D3 | 4989                       | 164                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH25YZU3D3 |                            |                                  |                                           |
|                                                                                                     |      | 4000    | MacAdam 2step | SPHWAHDNH25YZT2D3 | 5089                       | 167                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH25YZT3D3 |                            |                                  |                                           |
|                                                                                                     | 5000 |         | MacAdam 3step | SPHWAHDNH25YZR3D3 | 5132                       | 169                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH25YZQ3D3 | 5132                       | 169                              |                                           |
|                                                                                                     |      | 6500    | MacAdam 3step | SPHWAHDNH25YZP3D3 | 5089                       | 167                              |                                           |
| 90+                                                                                                 | 2700 |         | MacAdam 2step | SPHWAHDNH27YZW2D3 | 3947                       | 130                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH27YZW3D3 |                            |                                  |                                           |
|                                                                                                     |      | 3000    | MacAdam 2step | SPHWAHDNH27YZV2D3 | 4152                       | 136                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH27YZV3D3 |                            |                                  |                                           |
|                                                                                                     | 3500 |         | MacAdam 2step | SPHWAHDNH27YZU2D3 | 4276                       | 141                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH27YZU3D3 |                            |                                  |                                           |
|                                                                                                     |      | 4000    | MacAdam 2step | SPHWAHDNH27YZT2D3 | 4364                       | 143                              |                                           |
|                                                                                                     |      |         | MacAdam 3step | SPHWAHDNH27YZT3D3 |                            |                                  |                                           |
|                                                                                                     | 5000 |         | MacAdam 3step | SPHWAHDNH27YZR3D3 | 4401                       | 145                              |                                           |
|                                                                                                     |      |         |               |                   |                            |                                  |                                           |
|                                                                                                     |      |         |               |                   |                            |                                  |                                           |
|                                                                                                     |      |         |               |                   |                            |                                  |                                           |

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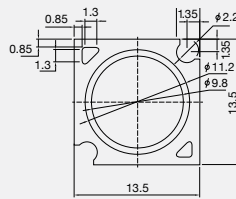
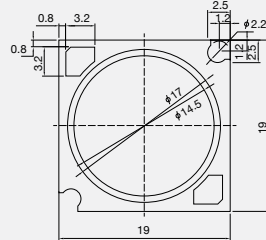
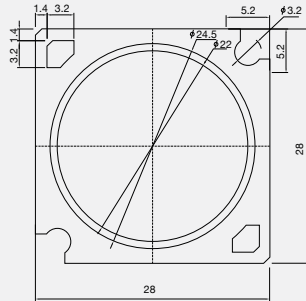
Component

| Product                                                                                               | CRI  | CCT (K) | Color rank    | Part Number       | T <sub>j</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-------------------------------------------------------------------------------------------------------|------|---------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                       |      |         |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC040D Gen 3   | 70+  | 3000    | MacAdam 3step | SPHWAHDNK23YZV3D3 | 6440                       | 176                              | 1080mA<br>33.8V                           |
|                                                                                                       |      | 4000    | MacAdam 3step | SPHWAHDNK23YZT3D3 | 6560                       | 180                              |                                           |
|                                                                                                       |      | 5000    | MacAdam 3step | SPHWAHDNK23YZR3D3 | 6679                       | 183                              |                                           |
|                                                                                                       | 2700 |         | MacAdam 2step | SPHWAHDNK25YZW2D3 | 5675                       | 155                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNK25YZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000    | MacAdam 2step | SPHWAHDNK25YZV2D3 | 5963                       | 163                              |                                           |
|                                                                                                       | 80+  |         | MacAdam 3step | SPHWAHDNK25YZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500    | MacAdam 2step | SPHWAHDNK25YZU2D3 | 6138                       | 168                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNK25YZU3D3 |                            |                                  |                                           |
|                                                                                                       |      | 4000    | MacAdam 2step | SPHWAHDNK25YZT2D3 | 6261                       | 172                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNK25YZT3D3 |                            |                                  |                                           |
|                                                                                                       |      | 5000    | MacAdam 3step | SPHWAHDNK25YZR3D3 | 6313                       | 173                              |                                           |
|                                                                                                       |      | 5700    | MacAdam 3step | SPHWAHDNK25YZQ3D3 | 6313                       | 173                              |                                           |
|                                                                                                       |      | 6500    | MacAdam 3step | SPHWAHDNK25YZP3D3 | 6261                       | 172                              |                                           |
|                                                                                                       | 90+  | 2700    | MacAdam 2step | SPHWAHDNK27YZW2D3 | 4856                       | 133                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNK27YZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000    | MacAdam 2step | SPHWAHDNK27YZV2D3 | 5108                       | 140                              |                                           |
| <br>LC060D Gen 3 | 90+  |         | MacAdam 3step | SPHWAHDNK27YZV3D3 |                            |                                  | 1080mA<br>50.7V                           |
|                                                                                                       |      | 3500    | MacAdam 2step | SPHWAHDNK27YZU2D3 | 5260                       | 144                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNK27YZU3D3 |                            |                                  |                                           |
|                                                                                                       | 4000 |         | MacAdam 2step | SPHWAHDNK27YZT2D3 | 5369                       | 147                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNK27YZT3D3 |                            |                                  |                                           |
|                                                                                                       |      | 5000    | MacAdam 3step | SPHWAHDNK27YZR3D3 | 5415                       | 148                              |                                           |
|                                                                                                       | 70+  | 3000    | MacAdam 3step | SPHWAHDNL231ZV3D3 | 9518                       | 174                              |                                           |
|                                                                                                       |      | 4000    | MacAdam 3step | SPHWAHDNL231ZT3D3 | 9694                       | 177                              |                                           |
|                                                                                                       |      | 5000    | MacAdam 3step | SPHWAHDNL231ZR3D3 | 9870                       | 180                              |                                           |
|                                                                                                       | 2700 |         | MacAdam 2step | SPHWAHDNL251ZW2D3 | 8386                       | 153                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL251ZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000    | MacAdam 2step | SPHWAHDNL251ZV2D3 | 8813                       | 161                              |                                           |
|                                                                                                       | 80+  |         | MacAdam 3step | SPHWAHDNL251ZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500    | MacAdam 2step | SPHWAHDNL251ZU2D3 | 9071                       | 166                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL251ZU3D3 |                            |                                  |                                           |
|                                                                                                       |      | 4000    | MacAdam 2step | SPHWAHDNL251ZT2D3 | 9253                       | 169                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL251ZT3D3 |                            |                                  |                                           |
|                                                                                                       | 5000 |         | MacAdam 3step | SPHWAHDNL251ZR3D3 | 9330                       | 170                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL251ZQ3D3 | 9330                       | 170                              |                                           |
|                                                                                                       |      | 6500    | MacAdam 3step | SPHWAHDNL251ZP3D3 | 9253                       | 169                              |                                           |
| <br>LC080D Gen 3 | 90+  |         | MacAdam 2step | SPHWAHDNL271ZW2D3 | 7177                       | 131                              | 1620mA<br>50.7V                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL271ZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000    | MacAdam 2step | SPHWAHDNL271ZV2D3 | 7549                       | 138                              |                                           |
|                                                                                                       | 80+  |         | MacAdam 3step | SPHWAHDNL271ZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500    | MacAdam 2step | SPHWAHDNL271ZU2D3 | 7774                       | 142                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL271ZU3D3 |                            |                                  |                                           |
|                                                                                                       |      | 4000    | MacAdam 2step | SPHWAHDNL271ZT2D3 | 7934                       | 145                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL271ZT3D3 |                            |                                  |                                           |
|                                                                                                       | 5000 |         | MacAdam 3step | SPHWAHDNL271ZR3D3 | 8002                       | 146                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNL271ZV3D3 | 14115                      | 172                              |                                           |
|                                                                                                       |      | 3000    | MacAdam 3step | SPHWAHDNM231ZV3D3 | 14115                      | 172                              |                                           |
|                                                                                                       | 70+  | 4000    | MacAdam 3step | SPHWAHDNM231ZT3D3 | 14376                      | 175                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM231ZR3D3 | 14637                      | 178                              |                                           |
|                                                                                                       |      | 5000    | MacAdam 3step | SPHWAHDNM231ZP3D3 | 14637                      | 178                              |                                           |
|                                                                                                       | 2700 |         | MacAdam 2step | SPHWAHDNM251ZW2D3 | 12437                      | 151                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM251ZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000    | MacAdam 2step | SPHWAHDNM251ZV2D3 | 13069                      | 159                              |                                           |
|                                                                                                       | 80+  |         | MacAdam 3step | SPHWAHDNM251ZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500    | MacAdam 2step | SPHWAHDNM251ZU2D3 | 13452                      | 164                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM251ZU3D3 |                            |                                  |                                           |
|                                                                                                       | 4000 |         | MacAdam 2step | SPHWAHDNM251ZT2D3 | 13721                      | 167                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM251ZT3D3 |                            |                                  |                                           |
|                                                                                                       |      | 5000    | MacAdam 3step | SPHWAHDNM251ZR3D3 | 13836                      | 168                              |                                           |
| 90+                                                                                                   | 5700 |         | MacAdam 3step | SPHWAHDNM251ZQ3D3 | 13836                      | 168                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM251ZP3D3 | 13721                      | 167                              |                                           |
|                                                                                                       |      | 6500    | MacAdam 3step | SPHWAHDNM251ZP3D3 | 13721                      | 167                              |                                           |
|                                                                                                       | 2700 |         | MacAdam 2step | SPHWAHDNM271ZW2D3 | 10643                      | 130                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM271ZW3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3000    | MacAdam 2step | SPHWAHDNM271ZV2D3 | 11195                      | 136                              |                                           |
|                                                                                                       | 80+  |         | MacAdam 3step | SPHWAHDNM271ZV3D3 |                            |                                  |                                           |
|                                                                                                       |      | 3500    | MacAdam 2step | SPHWAHDNM271ZU2D3 | 11529                      | 140                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM271ZU3D3 |                            |                                  |                                           |
|                                                                                                       |      | 4000    | MacAdam 2step | SPHWAHDNM271ZT2D3 | 11766                      | 143                              |                                           |
|                                                                                                       |      |         | MacAdam 3step | SPHWAHDNM271ZT3D3 |                            |                                  |                                           |
|                                                                                                       |      | 5000    | MacAdam 3step | SPHWAHDNM271ZR3D3 | 11867                      | 144                              |                                           |

D-series Gen 2

Full line-up for various applications: MR/PAR, spotlights, downlights & high bay lights

- Industry-leading light efficacy in COB lineups
- Better thermal resistance than Gen 1
- High reliability satisfying DLC Premium standards
- Completed 6,000 hours of LM-80 testing

| T <sub>J</sub> =85°C | LC003D<br>Gen 2                                                                     | LC006D<br>Gen 2   | LC009D<br>Gen 2    | LC013D<br>Gen 2                                                                     | LC016D<br>Gen 2     | LC019D<br>Gen 2     | LC026D<br>Gen 2                                                                       | LC033D<br>Gen 2     | LC040D<br>Gen 2      | LC060D<br>Gen 2      | LC080D<br>Gen 2     |
|----------------------|-------------------------------------------------------------------------------------|-------------------|--------------------|-------------------------------------------------------------------------------------|---------------------|---------------------|---------------------------------------------------------------------------------------|---------------------|----------------------|----------------------|---------------------|
|                      |   |                   |                    |   |                     |                     |   |                     |                      |                      |                     |
| LES                  | 9.8mm                                                                               |                   |                    | 14.5mm                                                                              |                     |                     | 22 mm                                                                                 |                     |                      |                      |                     |
| Typical              | 34.6 V                                                                              |                   |                    |                                                                                     |                     |                     |                                                                                       |                     |                      | 52 V                 |                     |
|                      | 3.1 W<br>(90 mA)                                                                    | 6.2 W<br>(180 mA) | 9.4 W<br>(270 mA)  | 12.5 W<br>(360 mA)                                                                  | 15.6 W<br>(450 mA)  | 18.7 W<br>(540 mA)  | 24.9 W<br>(720 mA)                                                                    | 31.1W<br>(900 mA)   | 37.4 W<br>(1080 mA)  | 56.1 W<br>(1080 mA)  | 84.2 W<br>(1620 mA) |
| Max.                 | 8.6 W<br>(230 mA)                                                                   | 17.2W<br>(460 mA) | 25.9 W<br>(690 mA) | 34.5 W<br>(920 mA)                                                                  | 43.1 W<br>(1150 mA) | 51.8 W<br>(1380 mA) | 69 W<br>(1840 mA)                                                                     | 86.2 W<br>(2300 mA) | 103.5 W<br>(2760 mA) | 143.4 W<br>(2760 mA) | 215 W<br>(4140 mA)  |
| Dimension            |  |                   |                    |  |                     |                     |  |                     |                      |                      |                     |
| Size                 | 13.5mm x 13.5mm                                                                     |                   |                    | 19mm x 19mm                                                                         |                     |                     | 28mm x 28mm                                                                           |                     |                      |                      |                     |

| Product                                                                                             | CRI           | CCT (K)           | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA) | V <sub>F</sub> (V) |
|-----------------------------------------------------------------------------------------------------|---------------|-------------------|-------------------|-------------------|----------------------------|----------------------------------|---------------------|--------------------|
|                                                                                                     |               |                   |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                     |                    |
| <br>LC003D Gen 2 | 80+           | 2700              | MacAdam 2step     | SPHWAHDNA25YZW2D2 | 459                        | 147                              | 90mA<br>34.6V       |                    |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNA25YZW3D2 |                            |                                  |                     |                    |
|                                                                                                     |               | 3000              | MacAdam 2step     | SPHWAHDNA25YZV2D2 | 483                        | 155                              |                     |                    |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNA25YZV3D2 |                            |                                  |                     |                    |
|                                                                                                     |               | 3500              | MacAdam 2step     | SPHWAHDNA25YZU2D2 | 501                        | 161                              |                     |                    |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNA25YZU3D2 |                            |                                  |                     |                    |
|                                                                                                     |               | 4000              | MacAdam 2step     | SPHWAHDNA25Yzt2D2 | 507                        | 163                              |                     |                    |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNA25Yzt3D2 |                            |                                  |                     |                    |
|                                                                                                     |               | 5000              | MacAdam 3step     | SPHWAHDNA25YzR3D2 | 513                        | 165                              |                     |                    |
|                                                                                                     |               | 5700              | MacAdam 3step     | SPHWAHDNA25YzQ3D2 | 513                        | 165                              |                     |                    |
|                                                                                                     |               | 6500              | MacAdam 3step     | SPHWAHDNA25YzP3D2 | 507                        | 163                              |                     |                    |
|                                                                                                     | 90+           | 2700              | MacAdam 2step     | SPHWAHDNA27YZW2D2 | 388                        | 125                              |                     |                    |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNA27YZW3D2 |                            |                                  |                     |                    |
|                                                                                                     |               | 3000              | MacAdam 2step     | SPHWAHDNA27YZV2D2 | 406                        | 130                              |                     |                    |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNA27YZV3D2 |                            |                                  |                     |                    |
|                                                                                                     |               | 3500              | MacAdam 2step     | SPHWAHDNA27YZU2D2 | 419                        | 135                              |                     |                    |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNA27YZU3D2 |                            |                                  |                     |                    |
| 4000                                                                                                | MacAdam 2step | SPHWAHDNA27Yzt2D2 | 427               | 137               |                            |                                  |                     |                    |
|                                                                                                     | MacAdam 3step | SPHWAHDNA27Yzt3D2 |                   |                   |                            |                                  |                     |                    |
| 5000                                                                                                | MacAdam 3step | SPHWAHDNA27YzR3D2 | 430               | 138               |                            |                                  |                     |                    |
|                                                                                                     | 80+           | 2700              | MacAdam 2step     | SPHWAHDNB25YZW2D2 | 924                        | 148                              | 180mA<br>34.6V      |                    |
| MacAdam 3step                                                                                       |               |                   | SPHWAHDNB25YZW3D2 |                   |                            |                                  |                     |                    |
| 3000                                                                                                |               | MacAdam 2step     | SPHWAHDNB25YZV2D2 | 971               | 156                        |                                  |                     |                    |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNB25YZV3D2 |                   |                            |                                  |                     |                    |
| 3500                                                                                                |               | MacAdam 2step     | SPHWAHDNB25YZU2D2 | 1001              | 161                        |                                  |                     |                    |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNB25YZU3D2 |                   |                            |                                  |                     |                    |
| 4000                                                                                                |               | MacAdam 2step     | SPHWAHDNB25Yzt2D2 | 1024              | 164                        |                                  |                     |                    |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNB25Yzt3D2 |                   |                            |                                  |                     |                    |
| 5000                                                                                                |               | MacAdam 3step     | SPHWAHDNB25YzR3D2 | 1030              | 165                        |                                  |                     |                    |
| 5700                                                                                                |               | MacAdam 3step     | SPHWAHDNB25YzQ3D2 | 1030              | 165                        |                                  |                     |                    |
| 6500                                                                                                |               | MacAdam 3step     | SPHWAHDNB25YzP3D2 | 1018              | 163                        |                                  |                     |                    |
| LC006D Gen 2                                                                                        | 2700          | MacAdam 2step     | SPHWAHDNB27YZW2D2 | 786               | 126                        |                                  |                     |                    |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNB27YZW3D2 |                   |                            |                                  |                     |                    |
|                                                                                                     | 3000          | MacAdam 2step     | SPHWAHDNB27YZV2D2 | 824               | 132                        |                                  |                     |                    |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNB27YZV3D2 |                   |                            |                                  |                     |                    |
|                                                                                                     | 3500          | MacAdam 2step     | SPHWAHDNB27YZU2D2 | 853               | 137                        |                                  |                     |                    |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNB27YZU3D2 |                   |                            |                                  |                     |                    |
|                                                                                                     | 4000          | MacAdam 2step     | SPHWAHDNB27Yzt2D2 | 870               | 140                        |                                  |                     |                    |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNB27Yzt3D2 |                   |                            |                                  |                     |                    |
|                                                                                                     | 5000          | MacAdam 3step     | SPHWAHDNB27YzR3D2 | 874               | 140                        |                                  |                     |                    |

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Component

| Product                                                                                           | CRI           | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |     |
|---------------------------------------------------------------------------------------------------|---------------|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|-----|
|                                                                                                   |               |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |     |
| <br>LC009D Gen 2 | 70+           | 3000          | MacAdam 3step     | SPHWAHDNC23YZV3D2 | 1578                       | 161                              | 270mA<br>34.6V                            |     |
|                                                                                                   |               | 4000          | MacAdam 3step     | SPHWAHDNC23Yzt3D2 | 1654                       | 169                              |                                           |     |
|                                                                                                   |               | 5000          | MacAdam 3step     | SPHWAHDNC23YzR3D2 | 1707                       | 174                              |                                           |     |
|                                                                                                   | 80+           | 2700          | MacAdam 2step     | SPHWAHDNC25YZW2D2 | 1342                       | 144                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC25YZW3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 3000          | MacAdam 2step     | SPHWAHDNC25YZV2D2 | 1418                       | 152                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC25YZV3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 3500          | MacAdam 2step     | SPHWAHDNC25YZU2D2 | 1459                       | 156                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC25YZU3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 4000          | MacAdam 2step     | SPHWAHDNC25Yzt2D2 | 1494                       | 160                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC25Yzt3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 5000          | MacAdam 3step     | SPHWAHDNC25YzR3D2 | 1506                       | 161                              |                                           |     |
|                                                                                                   |               | 5700          | MacAdam 3step     | SPHWAHDNC25YzQ3D2 | 1506                       | 161                              |                                           |     |
|                                                                                                   |               | 6500          | MacAdam 3step     | SPHWAHDNC25YzP3D2 | 1488                       | 159                              |                                           |     |
|                                                                                                   | 90+           | 2700          | MacAdam 2step     | SPHWAHDNC27YZW2D2 | 1152                       | 123                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC27YZW3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 3000          | MacAdam 2step     | SPHWAHDNC27YZV2D2 | 1206                       | 129                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC27YZV3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 3500          | MacAdam 2step     | SPHWAHDNC27YZU2D2 | 1245                       | 133                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC27YZU3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 4000          | MacAdam 2step     | SPHWAHDNC27Yzt2D2 | 1273                       | 136                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDNC27Yzt3D2 |                            |                                  |                                           |     |
|                                                                                                   |               | 5000          | MacAdam 3step     | SPHWAHDNC27YzR3D2 | 1278                       | 137                              |                                           |     |
|                                                                                                   |               | 70+           | 3000              | MacAdam 3step     | SPHWAHDND23YZV3D2          | 2106                             |                                           | 161 |
|                                                                                                   |               |               | 4000              | MacAdam 3step     | SPHWAHDND23Yzt3D2          | 2173                             |                                           | 166 |
|                                                                                                   |               |               | 5000              | MacAdam 3step     | SPHWAHDND23YzR3D2          | 2207                             |                                           | 169 |
|                                                                                                   |               |               | 2700              | MacAdam 2step     | SPHWAHDND25YZW2D2          | 1764                             |                                           | 142 |
|                                                                                                   |               |               |                   | MacAdam 3step     | SPHWAHDND25YZW3D2          |                                  |                                           |     |
| 3000                                                                                              | MacAdam 2step |               | SPHWAHDND25YZV2D2 | 1857              | 149                        |                                  |                                           |     |
|                                                                                                   | MacAdam 3step |               | SPHWAHDND25YZV3D2 |                   |                            |                                  |                                           |     |
| 80+                                                                                               | 3500          |               | MacAdam 2step     | SPHWAHDND25YZU2D2 | 1915                       | 154                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDND25YZU3D2 |                            |                                  |                                           |     |
|                                                                                                   | 4000          |               | MacAdam 2step     | SPHWAHDND25Yzt2D2 | 1950                       | 157                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDND25Yzt3D2 |                            |                                  |                                           |     |
|                                                                                                   | 5000          |               | MacAdam 3step     | SPHWAHDND25YzR3D2 | 1967                       | 158                              |                                           |     |
|                                                                                                   | 5700          |               | MacAdam 3step     | SPHWAHDND25YzQ3D2 | 1967                       | 158                              |                                           |     |
|                                                                                                   | 6500          |               | MacAdam 3step     | SPHWAHDND25YzP3D2 | 1938                       | 156                              |                                           |     |
| 90+                                                                                               | 2700          |               | MacAdam 2step     | SPHWAHDND27YZW2D2 | 1509                       | 121                              |                                           |     |
|                                                                                                   |               |               | MacAdam 3step     | SPHWAHDND27YZW3D2 |                            |                                  |                                           |     |
|                                                                                                   | 3000          | MacAdam 2step | SPHWAHDND27YZV2D2 | 1580              | 127                        |                                  |                                           |     |
|                                                                                                   |               | MacAdam 3step | SPHWAHDND27YZV3D2 |                   |                            |                                  |                                           |     |
|                                                                                                   | 3500          | MacAdam 2step | SPHWAHDND27YZU2D2 | 1635              | 131                        |                                  |                                           |     |
|                                                                                                   |               | MacAdam 3step | SPHWAHDND27YZU3D2 |                   |                            |                                  |                                           |     |
|                                                                                                   | 4000          | MacAdam 2step | SPHWAHDND27Yzt2D2 | 1670              | 134                        |                                  |                                           |     |
|                                                                                                   |               | MacAdam 3step | SPHWAHDND27Yzt3D2 |                   |                            |                                  |                                           |     |
|                                                                                                   | 5000          | MacAdam 3step | SPHWAHDND27YzR3D2 | 1674              | 134                        |                                  |                                           |     |

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Component

| Product                                                                                             | CRI           | CCT (K)                                                                                               | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |      |     |                |
|-----------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|------|-----|----------------|
|                                                                                                     |               |                                                                                                       |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |      |     |                |
| <br>LC016D Gen 2 | 70+           | 3000                                                                                                  | MacAdam 3step     | SPHWAHDNE23YZV3D2 | 2617                       | 168                              | 450mA<br>34.6V                            |      |     |                |
|                                                                                                     |               | 4000                                                                                                  | MacAdam 3step     | SPHWAHDNE23Yzt3D2 | 2701                       | 173                              |                                           |      |     |                |
|                                                                                                     |               | 5000                                                                                                  | MacAdam 3step     | SPHWAHDNE23YzR3D2 | 2742                       | 176                              |                                           |      |     |                |
|                                                                                                     | 80+           | 2700                                                                                                  | MacAdam 2step     | SPHWAHDNE25YZW2D2 | 2293                       | 147                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE25YZW3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 3000                                                                                                  | MacAdam 2step     | SPHWAHDNE25YZV2D2 | 2423                       | 156                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE25YZV3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 3500                                                                                                  | MacAdam 2step     | SPHWAHDNE25YZU2D2 | 2513                       | 161                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE25YZU3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 4000                                                                                                  | MacAdam 2step     | SPHWAHDNE25Yzt2D2 | 2558                       | 164                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE25Yzt3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 5000                                                                                                  | MacAdam 3step     | SPHWAHDNE25YzR3D2 | 2581                       | 166                              |                                           |      |     |                |
|                                                                                                     |               | 5700                                                                                                  | MacAdam 3step     | SPHWAHDNE25YzQ3D2 | 2581                       | 166                              |                                           |      |     |                |
|                                                                                                     |               | 6500                                                                                                  | MacAdam 3step     | SPHWAHDNE25YzP3D2 | 2558                       | 164                              |                                           |      |     |                |
|                                                                                                     | 90+           | 2700                                                                                                  | MacAdam 2step     | SPHWAHDNE27YZW2D2 | 1967                       | 126                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE27YZW3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 3000                                                                                                  | MacAdam 2step     | SPHWAHDNE27YZV2D2 | 2084                       | 134                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE27YZV3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 3500                                                                                                  | MacAdam 2step     | SPHWAHDNE27YZU2D2 | 2146                       | 138                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE27YZU3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 4000                                                                                                  | MacAdam 2step     | SPHWAHDNE27Yzt2D2 | 2189                       | 141                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNE27Yzt3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     |               | 5000                                                                                                  | MacAdam 3step     | SPHWAHDNE27YzR3D2 | 2209                       | 142                              |                                           |      |     |                |
|                                                                                                     |               | <br>LC019D Gen 2 | 70+               | 3000              | MacAdam 3step              | SPHWAHDNF23YZV3D2                |                                           | 3107 | 166 | 540mA<br>34.6V |
|                                                                                                     |               |                                                                                                       |                   | 4000              | MacAdam 3step              | SPHWAHDNF23Yzt3D2                |                                           | 3207 | 172 |                |
|                                                                                                     |               |                                                                                                       |                   | 5000              | MacAdam 3step              | SPHWAHDNF23YzR3D2                |                                           | 3256 | 174 |                |
|                                                                                                     |               |                                                                                                       |                   |                   |                            |                                  |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | 80+               | 2700              | MacAdam 2step              | SPHWAHDNF25YZW2D2                |                                           | 2728 | 146 |                |
|                                                                                                     |               |                                                                                                       |                   | MacAdam 3step     | SPHWAHDNF25YZW3D2          |                                  |                                           |      |     |                |
| 3000                                                                                                |               |                                                                                                       |                   | MacAdam 2step     | SPHWAHDNF25YZV2D2          | 2877                             | 154                                       |      |     |                |
|                                                                                                     | MacAdam 3step |                                                                                                       |                   | SPHWAHDNF25YZV3D2 |                            |                                  |                                           |      |     |                |
| 3500                                                                                                | MacAdam 2step |                                                                                                       |                   | SPHWAHDNF25YZU2D2 | 2965                       | 159                              |                                           |      |     |                |
|                                                                                                     | MacAdam 3step |                                                                                                       |                   | SPHWAHDNF25YZU3D2 |                            |                                  |                                           |      |     |                |
| 4000                                                                                                | MacAdam 2step |                                                                                                       |                   | SPHWAHDNF25Yzt2D2 | 3026                       | 162                              |                                           |      |     |                |
|                                                                                                     | MacAdam 3step |                                                                                                       |                   | SPHWAHDNF25Yzt3D2 |                            |                                  |                                           |      |     |                |
| 5000                                                                                                | MacAdam 3step |                                                                                                       |                   | SPHWAHDNF25YzR3D2 | 3059                       | 164                              |                                           |      |     |                |
| 5700                                                                                                | MacAdam 3step |                                                                                                       |                   | SPHWAHDNF25YzQ3D2 | 3059                       | 164                              |                                           |      |     |                |
| 6500                                                                                                | MacAdam 3step |                                                                                                       | SPHWAHDNF25YzP3D2 | 3026              | 162                        |                                  |                                           |      |     |                |
| 90+                                                                                                 | 2700          |                                                                                                       | MacAdam 2step     | SPHWAHDNF27YZW2D2 | 2336                       | 125                              |                                           |      |     |                |
|                                                                                                     |               |                                                                                                       | MacAdam 3step     | SPHWAHDNF27YZW3D2 |                            |                                  |                                           |      |     |                |
|                                                                                                     | 3000          |                                                                                                       | MacAdam 2step     | SPHWAHDNF27YZV2D2 | 2449                       | 131                              |                                           |      |     |                |
|                                                                                                     |               | MacAdam 3step                                                                                         | SPHWAHDNF27YZV3D2 |                   |                            |                                  |                                           |      |     |                |
|                                                                                                     | 3500          | MacAdam 2step                                                                                         | SPHWAHDNF27YZU2D2 | 2539              | 136                        |                                  |                                           |      |     |                |
|                                                                                                     |               | MacAdam 3step                                                                                         | SPHWAHDNF27YZU3D2 |                   |                            |                                  |                                           |      |     |                |
|                                                                                                     | 4000          | MacAdam 2step                                                                                         | SPHWAHDNF27Yzt2D2 | 2594              | 139                        |                                  |                                           |      |     |                |
|                                                                                                     |               | MacAdam 3step                                                                                         | SPHWAHDNF27Yzt3D2 |                   |                            |                                  |                                           |      |     |                |
|                                                                                                     | 5000          | MacAdam 3step                                                                                         | SPHWAHDNF27YzR3D2 | 2596              | 139                        |                                  |                                           |      |     |                |

Chip-on-Board LEDs

Component

| Product                                                                                           | CRI  | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |  |
|---------------------------------------------------------------------------------------------------|------|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|--|
|                                                                                                   |      |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |  |
| <br>LC026D Gen 2 | 70+  | 3000          | MacAdam 3step     | SPHWAHDNG23YZV3D2 | 4063                       | 163                              | 720mA<br>34.6V                            |  |
|                                                                                                   |      | 4000          | MacAdam 3step     | SPHWAHDNG23YZT3D2 | 4193                       | 168                              |                                           |  |
|                                                                                                   |      | 5000          | MacAdam 3step     | SPHWAHDNG23YZR3D2 | 4258                       | 171                              |                                           |  |
|                                                                                                   | 80+  | 2700          | MacAdam 2step     | SPHWAHDNG25YZW2D2 | 3580                       | 144                              |                                           |  |
|                                                                                                   |      |               | MacAdam 3step     | SPHWAHDNG25YZW3D2 |                            |                                  |                                           |  |
|                                                                                                   |      | 3000          | MacAdam 2step     | SPHWAHDNG25YZV2D2 | 3762                       | 151                              |                                           |  |
|                                                                                                   |      |               | MacAdam 3step     | SPHWAHDNG25YZV3D2 |                            |                                  |                                           |  |
|                                                                                                   |      | 3500          | MacAdam 2step     | SPHWAHDNG25YZU2D2 | 3872                       | 155                              |                                           |  |
|                                                                                                   |      |               | MacAdam 3step     | SPHWAHDNG25YZU3D2 |                            |                                  |                                           |  |
|                                                                                                   |      | 4000          | MacAdam 2step     | SPHWAHDNG25YZT2D2 | 3950                       | 159                              |                                           |  |
|                                                                                                   |      |               | MacAdam 3step     | SPHWAHDNG25YZT3D2 |                            |                                  |                                           |  |
|                                                                                                   | 5000 | MacAdam 3step | SPHWAHDNG25YZR3D2 | 3983              | 160                        |                                  |                                           |  |
|                                                                                                   | 5700 | MacAdam 3step | SPHWAHDNG25YZQ3D2 | 3983              | 160                        |                                  |                                           |  |
|                                                                                                   | 6500 | MacAdam 3step | SPHWAHDNG25YZP3D2 | 3950              | 159                        |                                  |                                           |  |
| 90+                                                                                               | 2700 | MacAdam 2step | SPHWAHDNG27YZW2D2 | 3064              | 123                        |                                  |                                           |  |
|                                                                                                   |      | MacAdam 3step | SPHWAHDNG27YZW3D2 |                   |                            |                                  |                                           |  |
|                                                                                                   | 3000 | MacAdam 2step | SPHWAHDNG27YZV2D2 | 3223              | 129                        |                                  |                                           |  |
|                                                                                                   |      | MacAdam 3step | SPHWAHDNG27YZV3D2 |                   |                            |                                  |                                           |  |
|                                                                                                   | 3500 | MacAdam 2step | SPHWAHDNG27YZU2D2 | 3319              | 133                        |                                  |                                           |  |
|                                                                                                   |      | MacAdam 3step | SPHWAHDNG27YZU3D2 |                   |                            |                                  |                                           |  |
|                                                                                                   | 4000 | MacAdam 2step | SPHWAHDNG27YZT2D2 | 3387              | 136                        |                                  |                                           |  |
|                                                                                                   |      | MacAdam 3step | SPHWAHDNG27YZT3D2 |                   |                            |                                  |                                           |  |

|                                                                                                     |               |                   |                   |                   |      |     |                |  |
|-----------------------------------------------------------------------------------------------------|---------------|-------------------|-------------------|-------------------|------|-----|----------------|--|
| <br>LC033D Gen 2 | 70+           | 3000              | MacAdam 3step     | SPHWAHDNH23YZV3D2 | 5014 | 161 | 900mA<br>34.6V |  |
|                                                                                                     |               | 4000              | MacAdam 3step     | SPHWAHDNH23YZT3D2 | 5175 | 166 |                |  |
|                                                                                                     |               | 5000              | MacAdam 3step     | SPHWAHDNH23YZR3D2 | 5255 | 169 |                |  |
|                                                                                                     | 80+           | 2700              | MacAdam 2step     | SPHWAHDNH25YZW2D2 | 4418 | 142 |                |  |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNH25YZW3D2 |      |     |                |  |
|                                                                                                     |               | 3000              | MacAdam 2step     | SPHWAHDNH25YZV2D2 | 4643 | 149 |                |  |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNH25YZV3D2 |      |     |                |  |
|                                                                                                     |               | 3500              | MacAdam 2step     | SPHWAHDNH25YZU2D2 | 4779 | 153 |                |  |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNH25YZU3D2 |      |     |                |  |
|                                                                                                     |               | 4000              | MacAdam 2step     | SPHWAHDNH25YZT2D2 | 4875 | 157 |                |  |
|                                                                                                     |               |                   | MacAdam 3step     | SPHWAHDNH25YZT3D2 |      |     |                |  |
|                                                                                                     | 5000          | MacAdam 3step     | SPHWAHDNH25YZR3D2 | 4916              | 158  |     |                |  |
|                                                                                                     | 5700          | MacAdam 3step     | SPHWAHDNH25YZQ3D2 | 4916              | 158  |     |                |  |
|                                                                                                     | 6500          | MacAdam 3step     | SPHWAHDNH25YZP3D2 | 4875              | 157  |     |                |  |
| 90+                                                                                                 | 2700          | MacAdam 2step     | SPHWAHDNH27YZW2D2 | 3781              | 121  |     |                |  |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNH27YZW2D2 |                   |      |     |                |  |
|                                                                                                     | 3000          | MacAdam 2step     | SPHWAHDNH27YZV2D2 | 3977              | 128  |     |                |  |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNH27YZV3D2 |                   |      |     |                |  |
|                                                                                                     | 3500          | MacAdam 2step     | SPHWAHDNH27YZU2D2 | 4096              | 132  |     |                |  |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNH27YZU3D2 |                   |      |     |                |  |
|                                                                                                     | 4000          | MacAdam 2step     | SPHWAHDNH27YZT2D2 | 4180              | 134  |     |                |  |
|                                                                                                     |               | MacAdam 3step     | SPHWAHDNH27YZT2D2 |                   |      |     |                |  |
| 5000                                                                                                | MacAdam 3step | SPHWAHDNH27YZR3D2 | 4216              | 135               |      |     |                |  |

Chip-on-Board LEDs

Component

| Product                                                                                               | CRI                                                                                                   | CCT (K)       | Color rank        | Part Number       | T <sub>j</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |               |               |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|---------------|---------------|
|                                                                                                       |                                                                                                       |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |               |               |
| <br>LC040D Gen 2   | 70+                                                                                                   | 3000          | MacAdam 3step     | SPHWAHDNK23YZV3D2 | 6304                       | 169                              | 1080mA<br>34.6V                           |               |               |
|                                                                                                       |                                                                                                       | 4000          | MacAdam 3step     | SPHWAHDNK23YZT3D2 | 6506                       | 174                              |                                           |               |               |
|                                                                                                       |                                                                                                       | 5000          | MacAdam 3step     | SPHWAHDNK23YZR3D2 | 6607                       | 177                              |                                           |               |               |
|                                                                                                       | 80+                                                                                                   | 2700          | MacAdam 2step     | SPHWAHDNK25YZW2D2 | 5547                       | 148                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNK25YZW3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 3000          | MacAdam 2step     | SPHWAHDNK25YZV2D2 | 5837                       | 156                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNK25YZV3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 3500          | MacAdam 2step     | SPHWAHDNK25YZU2D2 | 6016                       | 161                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNK25YZU3D2 |                            |                                  |                                           |               |               |
|                                                                                                       | 90+                                                                                                   | 4000          | MacAdam 2step     | SPHWAHDNK25YZT2D2 | 6146                       | 164                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNK25YZT3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 5000          | MacAdam 3step     | SPHWAHDNK25YZR3D2 | 6175                       | 165                              |                                           |               |               |
|                                                                                                       | <br>LC060D Gen 2 | 70+           | 5700              | MacAdam 3step     | SPHWAHDNK25YZQ3D2          | 6205                             |                                           | 166           | 1080mA<br>52V |
|                                                                                                       |                                                                                                       |               | 6500              | MacAdam 3step     | SPHWAHDNK25YZP3D2          | 6138                             |                                           | 164           |               |
| 2700                                                                                                  |                                                                                                       |               | MacAdam 2step     | SPHWAHDNK27YZW2D2 | 4755                       | 127                              |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNK27YZW3D2 |                   |                            |                                  |                                           |               |               |
| 80+                                                                                                   |                                                                                                       | 3000          | MacAdam 2step     | SPHWAHDNK27YZV2D2 | 5024                       | 134                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNK27YZV3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 3500          | MacAdam 2step     | SPHWAHDNK27YZU2D2 | 5152                       | 138                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNK27YZU3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 4000          | MacAdam 2step     | SPHWAHDNK27YZT2D2 | 5266                       | 141                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNK27YZT3D2 |                            |                                  |                                           |               |               |
| 90+                                                                                                   |                                                                                                       | 5000          | MacAdam 3step     | SPHWAHDNK27YZR3D2 | 5325                       | 143                              |                                           |               |               |
|                                                                                                       |                                                                                                       | 3000          | MacAdam 3step     | SPHWAHDNL231ZV3D2 | 9225                       | 164                              | 1080mA<br>52V                             |               |               |
|                                                                                                       |                                                                                                       | 4000          | MacAdam 3step     | SPHWAHDNL231ZT3D2 | 9521                       | 170                              |                                           |               |               |
| 5000                                                                                                  |                                                                                                       | MacAdam 3step | SPHWAHDNL231ZR3D2 | 9668              | 172                        |                                  |                                           |               |               |
| 80+                                                                                                   | 2700                                                                                                  | MacAdam 2step | SPHWAHDNL251ZW2D2 | 8107              | 144                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNL251ZW3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 3000                                                                                                  | MacAdam 2step | SPHWAHDNL251ZV2D2 | 8542              | 152                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNL251ZV3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 3500                                                                                                  | MacAdam 2step | SPHWAHDNL251ZU2D2 | 8812              | 157                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNL251ZU3D2 |                   |                            |                                  |                                           |               |               |
| 90+                                                                                                   | 4000                                                                                                  | MacAdam 2step | SPHWAHDNL251ZT2D2 | 8995              | 160                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNL251ZT3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 5000                                                                                                  | MacAdam 3step | SPHWAHDNL251ZR3D2 | 9039              | 161                        |                                  |                                           |               |               |
| <br>LC080D Gen 2 | 70+                                                                                                   | 5700          | MacAdam 3step     | SPHWAHDNL251ZQ3D2 | 9084                       | 162                              |                                           | 1620mA<br>52V |               |
|                                                                                                       |                                                                                                       | 6500          | MacAdam 3step     | SPHWAHDNL251ZP3D2 | 8990                       | 160                              |                                           |               |               |
|                                                                                                       |                                                                                                       | 2700          | MacAdam 2step     | SPHWAHDNL271ZW2D2 | 6959                       | 124                              |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNL271ZW3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 80+                                                                                                   | 3000          | MacAdam 2step     | SPHWAHDNL271ZV2D2 | 7352                       | 131                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNL271ZV3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 3500          | MacAdam 2step     | SPHWAHDNL271ZU2D2 | 7539                       | 134                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNL271ZU3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 4000          | MacAdam 2step     | SPHWAHDNL271ZT2D2 | 7706                       | 137                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNL271ZT3D2 |                            |                                  |                                           |               |               |
|                                                                                                       | 90+                                                                                                   | 5000          | MacAdam 3step     | SPHWAHDNL271ZR3D2 | 7793                       | 139                              |                                           |               |               |
|                                                                                                       |                                                                                                       | 3000          | MacAdam 3step     | SPHWAHDNM231ZV3D2 | 13465                      | 160                              | 1620mA<br>52V                             |               |               |
|                                                                                                       |                                                                                                       | 4000          | MacAdam 3step     | SPHWAHDNM231ZT3D2 | 13896                      | 165                              |                                           |               |               |
|                                                                                                       | 5000                                                                                                  | MacAdam 3step | SPHWAHDNM231ZR3D2 | 14112             | 168                        |                                  |                                           |               |               |
| 80+                                                                                                   | 2700                                                                                                  | MacAdam 2step | SPHWAHDNM251ZW2D2 | 11815             | 140                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNM251ZW3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 3000                                                                                                  | MacAdam 2step | SPHWAHDNM251ZV2D2 | 12468             | 148                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNM251ZV3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 3500                                                                                                  | MacAdam 2step | SPHWAHDNM251ZU2D2 | 12852             | 153                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNM251ZU3D2 |                   |                            |                                  |                                           |               |               |
| 90+                                                                                                   | 4000                                                                                                  | MacAdam 2step | SPHWAHDNM251ZT2D2 | 13123             | 156                        |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNM251ZT3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 5000                                                                                                  | MacAdam 3step | SPHWAHDNM251ZR3D2 | 13196             | 157                        |                                  |                                           |               |               |
| <br>LC080D Gen 2 | 70+                                                                                                   | 5700          | MacAdam 3step     | SPHWAHDNM251ZQ3D2 | 13258                      | 157                              |                                           | 1620mA<br>52V |               |
|                                                                                                       |                                                                                                       | 6500          | MacAdam 3step     | SPHWAHDNM251ZP3D2 | 13121                      | 156                              |                                           |               |               |
|                                                                                                       |                                                                                                       | 2700          | MacAdam 2step     | SPHWAHDNM271ZW2D2 | 10157                      | 121                              |                                           |               |               |
|                                                                                                       |                                                                                                       | MacAdam 3step | SPHWAHDNM271ZW3D2 |                   |                            |                                  |                                           |               |               |
|                                                                                                       | 80+                                                                                                   | 3000          | MacAdam 2step     | SPHWAHDNM271ZV2D2 | 10731                      | 127                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNM271ZV3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 3500          | MacAdam 2step     | SPHWAHDNM271ZU2D2 | 11004                      | 131                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNM271ZU3D2 |                            |                                  |                                           |               |               |
|                                                                                                       |                                                                                                       | 4000          | MacAdam 2step     | SPHWAHDNM271ZT2D2 | 11247                      | 134                              |                                           |               |               |
|                                                                                                       |                                                                                                       |               | MacAdam 3step     | SPHWAHDNM271ZT3D2 |                            |                                  |                                           |               |               |
|                                                                                                       | 90+                                                                                                   | 5000          | MacAdam 3step     | SPHWAHDNM271ZR3D2 | 11375                      | 135                              |                                           |               |               |

D-series Gen 1

Full line-up for various applications: MR/PAR, spot lights, downlights & flood lights

- Chip-on-Board (COB) solution makes it easy to design in
- Simple assembly reduces manufacturing & tooling cost
- Low thermal resistance
- Completed 6,000 hours of LM-80 testing

| T <sub>J</sub> =85°C | LC003D<br>Gen 1                                                                    | LC006D<br>Gen 1   | LC009D<br>Gen 1    | LC013D<br>Gen 1    | LC016D<br>Gen 1                                                                    | LC019D<br>Gen 1     | LC026D<br>Gen 1    | LC040D<br>Gen 1                                                                      | LC060D<br>Gen 1      | LC080D<br>Gen 1     |
|----------------------|------------------------------------------------------------------------------------|-------------------|--------------------|--------------------|------------------------------------------------------------------------------------|---------------------|--------------------|--------------------------------------------------------------------------------------|----------------------|---------------------|
|                      |  |                   |                    |                    |  |                     |                    |  |                      |                     |
| LES                  | 9.8mm                                                                              |                   |                    |                    | 14.5mm                                                                             |                     |                    | 22 mm                                                                                |                      |                     |
| Typical              | 34.6 V                                                                             |                   |                    |                    |                                                                                    |                     |                    |                                                                                      | 52 V                 |                     |
|                      | 3.1 W<br>(90 mA)                                                                   | 6.2 W<br>(180 mA) | 9.4 W<br>(270 mA)  | 12.5 W<br>(360 mA) | 15.6 W<br>(450 mA)                                                                 | 18.7 W<br>(540 mA)  | 24.9 W<br>(720 mA) | 37.4 W<br>(1080 mA)                                                                  | 56.1 W<br>(1080 mA)  | 84.2 W<br>(1620 mA) |
| Max.                 | 8.6 W<br>(230 mA)                                                                  | 17.2W<br>(460 mA) | 25.9 W<br>(690 mA) | 34.5 W<br>(920 mA) | 43.1 W<br>(1150 mA)                                                                | 51.8 W<br>(1380 mA) | 69 W<br>(1840 mA)  | 103.5 W<br>(2760 mA)                                                                 | 143.4 W<br>(2760 mA) | 215 W<br>(2760 mA)  |
| Dimension            |                                                                                    |                   |                    |                    |                                                                                    |                     |                    |                                                                                      |                      |                     |

| Product                                                                                               | CRI           | CCT (K)           | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |     |
|-------------------------------------------------------------------------------------------------------|---------------|-------------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|-----|
|                                                                                                       |               |                   |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |     |
| <br>LC003D Gen 1 | 80+           | 2700              | MacAdam 2step     | SPHWAHDNA25YZW2A9 | 413                        | 133                              | 90mA<br>34.6V                             |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZW3A9 |                            |                                  |                                           |     |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNA25YZW2D1 | 434                        | 139                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZW3D1 |                            |                                  |                                           |     |
|                                                                                                       |               | 3000              | MacAdam 2step     | SPHWAHDNA25YZV2B1 | 435                        | 140                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZV3B1 |                            |                                  |                                           |     |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNA25YZV2D1 | 457                        | 147                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZV3D1 |                            |                                  |                                           |     |
|                                                                                                       |               | 3500              | MacAdam 2step     | SPHWAHDNA25YZU2B2 | 451                        | 145                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZU3B2 |                            |                                  |                                           |     |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNA25YZU2D1 | 474                        | 152                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZU3D1 |                            |                                  |                                           |     |
|                                                                                                       |               | 4000              | MacAdam 2step     | SPHWAHDNA25YZT2B3 | 457                        | 147                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZT3B3 |                            |                                  |                                           |     |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNA25YZT2D1 | 480                        | 154                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA25YZT3D1 |                            |                                  |                                           |     |
|                                                                                                       |               | 5000              | MacAdam 3step     | SPHWAHDNA25YZR3B3 | 462                        | 148                              |                                           |     |
|                                                                                                       |               |                   |                   | SPHWAHDNA25YZR3D1 | 485                        | 156                              |                                           |     |
|                                                                                                       |               |                   | 5700              | MacAdam 3step     | SPHWAHDNA25YZQ3B3          | 462                              |                                           | 148 |
|                                                                                                       |               |                   |                   |                   | SPHWAHDNA25YZQ3D1          | 485                              |                                           | 156 |
|                                                                                                       | 6500          | MacAdam 3step     | SPHWAHDNA25YZP3B3 | 457               | 147                        |                                  |                                           |     |
|                                                                                                       |               |                   | SPHWAHDNA25YZP3D1 | 480               | 154                        |                                  |                                           |     |
|                                                                                                       |               | 90+               | 2700              | MacAdam 2step     | SPHWAHDNA27YZW2A3          | 349                              |                                           | 112 |
|                                                                                                       |               |                   |                   | MacAdam 3step     | SPHWAHDNA27YZW3A3          |                                  |                                           |     |
|                                                                                                       | MacAdam 2step |                   |                   | SPHWAHDNA27YZW2D1 | 367                        | 118                              |                                           |     |
|                                                                                                       | MacAdam 3step |                   |                   | SPHWAHDNA27YZW3D1 |                            |                                  |                                           |     |
|                                                                                                       | 3000          |                   | MacAdam 2step     | SPHWAHDNA27YZV2A4 | 365                        | 117                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA27YZV3A4 |                            |                                  |                                           |     |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNA27YZV2D1 | 384                        | 123                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA27YZV3D1 |                            |                                  |                                           |     |
|                                                                                                       | 3500          |                   | MacAdam 2step     | SPHWAHDNA27YZU2A5 | 377                        | 121                              |                                           |     |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNA27YZU3A5 |                            |                                  |                                           |     |
| MacAdam 2step                                                                                         |               |                   | SPHWAHDNA27YZU2D1 | 396               | 127                        |                                  |                                           |     |
| MacAdam 3step                                                                                         |               |                   | SPHWAHDNA27YZU3D1 |                   |                            |                                  |                                           |     |
| 4000                                                                                                  | MacAdam 2step | SPHWAHDNA27YZT2A6 | 385               | 124               |                            |                                  |                                           |     |
|                                                                                                       |               | MacAdam 3step     |                   |                   | SPHWAHDNA27YZT3A6          |                                  |                                           |     |
|                                                                                                       | MacAdam 2step | SPHWAHDNA27YZT2D1 | 404               | 130               |                            |                                  |                                           |     |
|                                                                                                       | MacAdam 3step | SPHWAHDNA27YZT3D1 |                   |                   |                            |                                  |                                           |     |
| 5000                                                                                                  | MacAdam 3step | SPHWAHDNA27YZR3A6 | 387               | 124               |                            |                                  |                                           |     |
|                                                                                                       |               | SPHWAHDNA27YZR3D1 | 407               | 131               |                            |                                  |                                           |     |

Chip-on-Board LEDs

Component

| Product                                                                                             | CRI | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-----------------------------------------------------------------------------------------------------|-----|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                     |     |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC006D Gen 1 | 80+ | 2700          | MacAdam 2step     | SPHWAHDNB25YZW2E9 | 832                        | 134                              | 180mA<br>34.6V                            |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZW3E9 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNB25YZW2D1 | 874                        | 140                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZW3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3000          | MacAdam 2step     | SPHWAHDNB25YZV2F3 | 875                        | 140                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZV3F3 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNB25YZV2D1 | 919                        | 148                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZV3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3500          | MacAdam 2step     | SPHWAHDNB25YZU2F5 | 902                        | 145                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZU3F5 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNB25YZU2D1 | 947                        | 152                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZU3D1 |                            |                                  |                                           |
|                                                                                                     |     | 4000          | MacAdam 2step     | SPHWAHDNB25YZT2F8 | 923                        | 148                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZT3F8 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNB25YZT2D1 | 969                        | 156                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB25YZT3D1 |                            |                                  |                                           |
|                                                                                                     |     | 5000          | MacAdam 3step     | SPHWAHDNB25YZR3F8 | 928                        | 149                              |                                           |
|                                                                                                     |     |               |                   | SPHWAHDNB25YZR3D1 | 975                        | 157                              |                                           |
|                                                                                                     |     | 5700          | MacAdam 3step     | SPHWAHDNB25YZQ3F8 | 928                        | 149                              |                                           |
|                                                                                                     |     |               |                   | SPHWAHDNB25YZQ3D1 | 975                        | 157                              |                                           |
|                                                                                                     |     | 6500          | MacAdam 3step     | SPHWAHDNB25YZP3F7 | 918                        | 147                              |                                           |
|                                                                                                     |     |               |                   | SPHWAHDNB25YZP3D1 | 964                        | 155                              |                                           |
|                                                                                                     | 90+ | 2700          | MacAdam 2step     | SPHWAHDNB27YZW2D7 | 709                        | 114                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB27YZW3D7 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNB27YZW2D1 | 744                        | 119                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB27YZW3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3000          | MacAdam 2step     | SPHWAHDNB27YZV2E9 | 743                        | 119                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB27YZV3E9 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNB27YZV2D1 | 780                        | 125                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB27YZV3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3500          | MacAdam 2step     | SPHWAHDNB27YZU2E0 | 768                        | 123                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNB27YZU3E0 |                            |                                  |                                           |
| MacAdam 2step                                                                                       |     |               | SPHWAHDNB27YZU2D1 | 807               | 130                        |                                  |                                           |
| MacAdam 3step                                                                                       |     |               | SPHWAHDNB27YZU3D1 |                   |                            |                                  |                                           |
| 4000                                                                                                |     | MacAdam 2step | SPHWAHDNB27YZT2E4 | 784               | 126                        |                                  |                                           |
|                                                                                                     |     | MacAdam 3step | SPHWAHDNB27YZT3E4 |                   |                            |                                  |                                           |
|                                                                                                     |     | MacAdam 2step | SPHWAHDNB27YZT2D1 | 824               | 132                        |                                  |                                           |
|                                                                                                     |     | MacAdam 3step | SPHWAHDNB27YZT3D1 |                   |                            |                                  |                                           |
| 5000                                                                                                |     | MacAdam 3step | SPHWAHDNB27YZR3E4 | 787               | 126                        |                                  |                                           |
|                                                                                                     |     |               | SPHWAHDNB27YZR3D1 | 827               | 133                        |                                  |                                           |



LC006D Gen 1

Chip-on-Board LEDs

Component

| Product                                                                                               | CRI | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-------------------------------------------------------------------------------------------------------|-----|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                       |     |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC009D Gen 1 | 80+ | 2700          | MacAdam 2step     | SPHWAHDNC25YZW2H1 | 1209                       | 129                              | 270mA<br>34.6V                            |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZW3H1 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNC25YZW2D1 | 1270                       | 136                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZW3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3000          | MacAdam 2step     | SPHWAHDNC25YZV2H2 | 1278                       | 137                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZV3H2 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNC25YZV2D1 | 1342                       | 144                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZV3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3500          | MacAdam 2step     | SPHWAHDNC25YZU2H2 | 1315                       | 141                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZU3H2 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNC25YZU2D1 | 1381                       | 148                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZU3D1 |                            |                                  |                                           |
|                                                                                                       |     | 4000          | MacAdam 2step     | SPHWAHDNC25YZT2H2 | 1347                       | 144                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZT3H2 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNC25YZT2D1 | 1414                       | 151                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC25YZT3D1 |                            |                                  |                                           |
|                                                                                                       |     | 5000          | MacAdam 3step     | SPHWAHDNC25YZR3H2 | 1357                       | 145                              |                                           |
|                                                                                                       |     |               |                   | SPHWAHDNC25YZR3D1 | 1425                       | 153                              |                                           |
|                                                                                                       |     | 5700          | MacAdam 3step     | SPHWAHDNC25YZQ3H2 | 1357                       | 145                              |                                           |
|                                                                                                       |     |               |                   | SPHWAHDNC25YZQ3D1 | 1425                       | 153                              |                                           |
|                                                                                                       |     | 6500          | MacAdam 3step     | SPHWAHDNC25YZP3H2 | 1341                       | 144                              |                                           |
|                                                                                                       |     |               |                   | SPHWAHDNC25YZP3D1 | 1408                       | 151                              |                                           |
|                                                                                                       | 90+ | 2700          | MacAdam 2step     | SPHWAHDNC27YZW2G8 | 1038                       | 111                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC27YZW3G8 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNC27YZW2D1 | 1090                       | 117                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC27YZW3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3000          | MacAdam 2step     | SPHWAHDNC27YZV2H0 | 1087                       | 116                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC27YZV3H0 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNC27YZV2D1 | 1141                       | 122                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC27YZV3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3500          | MacAdam 2step     | SPHWAHDNC27YZU2H0 | 1122                       | 120                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNC27YZU3H0 |                            |                                  |                                           |
| MacAdam 2step                                                                                         |     |               | SPHWAHDNC27YZU2D1 | 1178              | 126                        |                                  |                                           |
| MacAdam 3step                                                                                         |     |               | SPHWAHDNC27YZU3D1 |                   |                            |                                  |                                           |
| 4000                                                                                                  |     | MacAdam 2step | SPHWAHDNC27YZT2H0 | 1147              | 123                        |                                  |                                           |
|                                                                                                       |     | MacAdam 3step | SPHWAHDNC27YZT3H0 |                   |                            |                                  |                                           |
|                                                                                                       |     | MacAdam 2step | SPHWAHDNC27YZT2D1 | 1204              | 129                        |                                  |                                           |
|                                                                                                       |     | MacAdam 3step | SPHWAHDNC27YZT3D1 |                   |                            |                                  |                                           |
| 5000                                                                                                  |     | MacAdam 3step | SPHWAHDNC27YZR3H1 | 1152              | 123                        |                                  |                                           |
|                                                                                                       |     |               | SPHWAHDNC27YZR3D1 | 1210              | 130                        |                                  |                                           |



LC009D Gen 1

Chip-on-Board LEDs

Component

| Product                                                                                             | CRI  | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-----------------------------------------------------------------------------------------------------|------|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                     |      |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC013D Gen 1 | 80+  | 2700          | MacAdam 2step     | SPHWAHDND25YZW2H5 | 1589                       | 128                              | 360mA<br>34.6V                            |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZW3H5 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDND25YZW2D1 | 1669                       | 134                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZW3D1 |                            |                                  |                                           |
|                                                                                                     |      | 3000          | MacAdam 2step     | SPHWAHDND25YZV2H5 | 1673                       | 134                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZV3H5 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDND25YZV2D1 | 1757                       | 141                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZV3D1 |                            |                                  |                                           |
|                                                                                                     |      | 3500          | MacAdam 2step     | SPHWAHDND25YZU2H6 | 1725                       | 138                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZU3H6 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDND25YZU2D1 | 1812                       | 145                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZU3D1 |                            |                                  |                                           |
|                                                                                                     |      | 4000          | MacAdam 2step     | SPHWAHDND25YZT2H6 | 1757                       | 141                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZT3H6 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDND25YZT2D1 | 1844                       | 148                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDND25YZT3D1 |                            |                                  |                                           |
|                                                                                                     |      | 5000          | MacAdam 3step     | SPHWAHDND25YZR3H6 | 1772                       | 142                              |                                           |
|                                                                                                     |      |               |                   | SPHWAHDND25YZR3D1 | 1861                       | 149                              |                                           |
|                                                                                                     |      | 5700          | MacAdam 3step     | SPHWAHDND25YZQ3H6 | 1772                       | 142                              |                                           |
|                                                                                                     |      |               |                   | SPHWAHDND25YZQ3D1 | 1861                       | 149                              |                                           |
|                                                                                                     |      | 6500          | MacAdam 3step     | SPHWAHDND25YZP3H6 | 1746                       | 140                              |                                           |
|                                                                                                     |      |               |                   | SPHWAHDND25YZP3D1 | 1834                       | 147                              |                                           |
| 90+                                                                                                 | 2700 | MacAdam 2step | SPHWAHDND27YZW2H2 | 1359              | 109                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27YZW3H2 |                   |                            |                                  |                                           |
|                                                                                                     |      | MacAdam 2step | SPHWAHDND27YZW2D1 | 1427              | 115                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27YZW3D2 |                   |                            |                                  |                                           |
|                                                                                                     | 3000 | MacAdam 2step | SPHWAHDND27YZV2H3 | 1423              | 114                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27YZV3H3 |                   |                            |                                  |                                           |
|                                                                                                     |      | MacAdam 2step | SPHWAHDND27YZV2D1 | 1494              | 120                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27YZV3D1 |                   |                            |                                  |                                           |
|                                                                                                     | 3500 | MacAdam 2step | SPHWAHDND27YZU2H4 | 1473              | 118                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27YZU3H4 |                   |                            |                                  |                                           |
|                                                                                                     |      | MacAdam 2step | SPHWAHDND27YZU2D1 | 1547              | 124                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27YZU3D1 |                   |                            |                                  |                                           |
|                                                                                                     | 4000 | MacAdam 2step | SPHWAHDND27Yzt2H4 | 1505              | 121                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27Yzt3H4 |                   |                            |                                  |                                           |
|                                                                                                     |      | MacAdam 2step | SPHWAHDND27Yzt2D1 | 1580              | 127                        |                                  |                                           |
|                                                                                                     |      | MacAdam 3step | SPHWAHDND27Yzt3D1 |                   |                            |                                  |                                           |
|                                                                                                     | 5000 | MacAdam 3step | SPHWAHDND27YzR3H4 | 1508              | 121                        |                                  |                                           |
|                                                                                                     |      |               | SPHWAHDND27YzR3D1 | 1584              | 127                        |                                  |                                           |

Chip-on-Board LEDs

Component

| Product                                                                                               | CRI           | CCT (K)           | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-------------------------------------------------------------------------------------------------------|---------------|-------------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                       |               |                   |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC016D Gen 1 | 80+           | 2700              | MacAdam 2step     | SPHWAHDNE25YZW2H9 | 2065                       | 133                              | 450mA<br>34.6V                            |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZW3H9 |                            |                                  |                                           |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNE25YZW2D1 | 2169                       | 139                              |                                           |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZW3D1 |                            |                                  |                                           |
|                                                                                                       |               | 3000              | MacAdam 2step     | SPHWAHDNE25YZV2J0 | 2182                       | 140                              |                                           |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZV3J0 |                            |                                  |                                           |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNE25YZV2D1 | 2291                       | 147                              |                                           |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZV3D1 |                            |                                  |                                           |
|                                                                                                       |               | 3500              | MacAdam 2step     | SPHWAHDNE25YZU2J1 | 2263                       | 145                              |                                           |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZU3J1 |                            |                                  |                                           |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNE25YZU2D1 | 2376                       | 153                              |                                           |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZU3D1 |                            |                                  |                                           |
|                                                                                                       |               | 4000              | MacAdam 2step     | SPHWAHDNE25YZT2J1 | 2304                       | 148                              |                                           |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZT3J1 |                            |                                  |                                           |
|                                                                                                       |               |                   | MacAdam 2step     | SPHWAHDNE25YZT2D1 | 2419                       | 155                              |                                           |
|                                                                                                       |               |                   | MacAdam 3step     | SPHWAHDNE25YZT3D1 |                            |                                  |                                           |
|                                                                                                       |               | 5000              | MacAdam 3step     | SPHWAHDNE25YZR3J2 | 2324                       | 149                              |                                           |
|                                                                                                       |               |                   |                   | SPHWAHDNE25YZR3D1 | 2440                       | 157                              |                                           |
|                                                                                                       |               | 5700              | MacAdam 3step     | SPHWAHDNE25YZQ3J2 | 2324                       | 149                              |                                           |
|                                                                                                       |               |                   |                   | SPHWAHDNE25YZQ3D1 | 2440                       | 157                              |                                           |
|                                                                                                       |               | 6500              | MacAdam 3step     | SPHWAHDNE25YZP3J1 | 2304                       | 148                              |                                           |
|                                                                                                       |               |                   |                   | SPHWAHDNE25YZP3D1 | 2419                       | 155                              |                                           |
| 90+                                                                                                   | 2700          | MacAdam 2step     | SPHWAHDNE27YZW2H6 | 1771              | 114                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27YZW3H6 |                   |                            |                                  |                                           |
|                                                                                                       |               | MacAdam 2step     | SPHWAHDNE27YZW2D1 | 1860              | 119                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27YZW3D1 |                   |                            |                                  |                                           |
|                                                                                                       | 3000          | MacAdam 2step     | SPHWAHDNE27YZV2H7 | 1877              | 121                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27YZV3H7 |                   |                            |                                  |                                           |
|                                                                                                       |               | MacAdam 2step     | SPHWAHDNE27YZV2D1 | 1970              | 127                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27YZV3D1 |                   |                            |                                  |                                           |
|                                                                                                       | 3500          | MacAdam 2step     | SPHWAHDNE27YZU2H8 | 1932              | 124                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27YZU3H8 |                   |                            |                                  |                                           |
|                                                                                                       |               | MacAdam 2step     | SPHWAHDNE27YZU2D1 | 2029              | 130                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27YZU3D1 |                   |                            |                                  |                                           |
|                                                                                                       | 4000          | MacAdam 2step     | SPHWAHDNE27Yzt2H8 | 1971              | 127                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27Yzt3H8 |                   |                            |                                  |                                           |
|                                                                                                       |               | MacAdam 2step     | SPHWAHDNE27Yzt2D1 | 2069              | 133                        |                                  |                                           |
|                                                                                                       |               | MacAdam 3step     | SPHWAHDNE27Yzt3D1 |                   |                            |                                  |                                           |
| 5000                                                                                                  | MacAdam 3step | SPHWAHDNE27YZR3H8 | 1989              | 128               |                            |                                  |                                           |
|                                                                                                       |               | SPHWAHDNE27YZR3D1 | 2089              | 134               |                            |                                  |                                           |

Chip-on-Board LEDs

Component

| Product                                                                                             | CRI | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-----------------------------------------------------------------------------------------------------|-----|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                     |     |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC019D Gen 1 | 80+ | 2700          | MacAdam 2step     | SPHWAHDNF25YZW2J3 | 2458                       | 132                              | 540mA<br>34.6V                            |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZW3J3 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNF25YZW2D1 | 2581                       | 138                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZW3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3000          | MacAdam 2step     | SPHWAHDNF25YZV24  | 2592                       | 139                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZV3J4 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNF25YZV2D1 | 2722                       | 146                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZV3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3500          | MacAdam 2step     | SPHWAHDNF25YZU25  | 2672                       | 143                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZU3J5 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNF25YZU2D1 | 2805                       | 150                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZU3D1 |                            |                                  |                                           |
|                                                                                                     |     | 4000          | MacAdam 2step     | SPHWAHDNF25YZT25  | 2726                       | 146                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZT3J5 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNF25YZT2D1 | 2863                       | 153                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF25YZT3D1 |                            |                                  |                                           |
|                                                                                                     |     | 5000          | MacAdam 3step     | SPHWAHDNF25YZR3J6 | 2756                       | 148                              |                                           |
|                                                                                                     |     |               |                   | SPHWAHDNF25YZR3D1 | 2894                       | 155                              |                                           |
|                                                                                                     |     | 5700          | MacAdam 3step     | SPHWAHDNF25YZQ3J6 | 2756                       | 148                              |                                           |
|                                                                                                     |     |               |                   | SPHWAHDNF25YZQ3D1 | 2894                       | 155                              |                                           |
|                                                                                                     |     | 6500          | MacAdam 3step     | SPHWAHDNF25YZP3J5 | 2726                       | 146                              |                                           |
|                                                                                                     |     |               |                   | SPHWAHDNF25YZP3D1 | 2863                       | 153                              |                                           |
|                                                                                                     | 90+ | 2700          | MacAdam 2step     | SPHWAHDNF27YZW2H9 | 2104                       | 113                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF27YZW3H9 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNF27YZW2D1 | 2210                       | 118                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF27YZW3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3000          | MacAdam 2step     | SPHWAHDNF27YZV2J0 | 2207                       | 118                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF27YZV3J0 |                            |                                  |                                           |
|                                                                                                     |     |               | MacAdam 2step     | SPHWAHDNF27YZV2D1 | 2317                       | 124                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF27YZV3D1 |                            |                                  |                                           |
|                                                                                                     |     | 3500          | MacAdam 2step     | SPHWAHDNF27YZU2J1 | 2287                       | 122                              |                                           |
|                                                                                                     |     |               | MacAdam 3step     | SPHWAHDNF27YZU3J1 |                            |                                  |                                           |
| MacAdam 2step                                                                                       |     |               | SPHWAHDNF27YZU2D1 | 2402              | 129                        |                                  |                                           |
| MacAdam 3step                                                                                       |     |               | SPHWAHDNF27YZU3D1 |                   |                            |                                  |                                           |
| 4000                                                                                                |     | MacAdam 2step | SPHWAHDNF27YZT2J2 | 2337              | 125                        |                                  |                                           |
|                                                                                                     |     | MacAdam 3step | SPHWAHDNF27YZT3J2 |                   |                            |                                  |                                           |
|                                                                                                     |     | MacAdam 2step | SPHWAHDNF27YZT2D1 | 2454              | 131                        |                                  |                                           |
|                                                                                                     |     | MacAdam 3step | SPHWAHDNF27YZT3D1 |                   |                            |                                  |                                           |
| 5000                                                                                                |     | MacAdam 3step | SPHWAHDNG27YZR3J8 | 2339              | 125                        |                                  |                                           |
|                                                                                                     |     |               | SPHWAHDNG27YZR3D1 | 2456              | 131                        |                                  |                                           |



LC019D Gen 1

Chip-on-Board LEDs

Component

| Product                                                                                               | CRI | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-------------------------------------------------------------------------------------------------------|-----|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                       |     |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC026D Gen 1 | 80+ | 2700          | MacAdam 2step     | SPHWAHDNK25YZW2M7 | 3225                       | 129                              | 720mA<br>34.6V                            |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZW3M7 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNK25YZW2D1 | 3386                       | 136                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZW3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3000          | MacAdam 2step     | SPHWAHDNK25YZV2M9 | 3389                       | 136                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZV3M9 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNK25YZV2D1 | 3558                       | 143                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZV3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3500          | MacAdam 2step     | SPHWAHDNK25YZU2N1 | 3488                       | 140                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZU3N1 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNK25YZU2D1 | 3663                       | 147                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZU3D1 |                            |                                  |                                           |
|                                                                                                       |     | 4000          | MacAdam 2step     | SPHWAHDNK25YZT2N2 | 3558                       | 143                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZT3N2 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNK25YZT2D1 | 3736                       | 150                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK25YZT3D1 |                            |                                  |                                           |
|                                                                                                       |     | 5000          | MacAdam 3step     | SPHWAHDNK25YZR3N2 | 3588                       | 144                              |                                           |
|                                                                                                       |     |               |                   | SPHWAHDNK25YZR3D1 | 3767                       | 151                              |                                           |
|                                                                                                       |     | 5700          | MacAdam 3step     | SPHWAHDNK25YZQ3N3 | 3588                       | 144                              |                                           |
|                                                                                                       |     |               |                   | SPHWAHDNK25YZQ3D1 | 3767                       | 151                              |                                           |
|                                                                                                       |     | 6500          | MacAdam 3step     | SPHWAHDNK25YZP3N2 | 3558                       | 143                              |                                           |
|                                                                                                       |     |               |                   | SPHWAHDNK25YZP3D1 | 3736                       | 150                              |                                           |
|                                                                                                       | 90+ | 2700          | MacAdam 2step     | SPHWAHDNK27YZW2M0 | 2760                       | 111                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK27YZW3M0 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNK27YZW2D1 | 2898                       | 116                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK27YZW3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3000          | MacAdam 2step     | SPHWAHDNK27YZV2M2 | 2903                       | 117                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK27YZV3M2 |                            |                                  |                                           |
|                                                                                                       |     |               | MacAdam 2step     | SPHWAHDNK27YZV2D1 | 3048                       | 122                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK27YZV3D1 |                            |                                  |                                           |
|                                                                                                       |     | 3500          | MacAdam 2step     | SPHWAHDNK27YZU2M4 | 2990                       | 120                              |                                           |
|                                                                                                       |     |               | MacAdam 3step     | SPHWAHDNK27YZU3M4 |                            |                                  |                                           |
| MacAdam 2step                                                                                         |     |               | SPHWAHDNK27YZU2D1 | 3139              | 126                        |                                  |                                           |
| MacAdam 3step                                                                                         |     |               | SPHWAHDNK27YZU3D1 |                   |                            |                                  |                                           |
| 4000                                                                                                  |     | MacAdam 2step | SPHWAHDNK27Yzt2M5 | 3051              | 122                        |                                  |                                           |
|                                                                                                       |     | MacAdam 3step | SPHWAHDNK27Yzt3M5 |                   |                            |                                  |                                           |
|                                                                                                       |     | MacAdam 2step | SPHWAHDNK27Yzt2D1 | 3204              | 129                        |                                  |                                           |
|                                                                                                       |     | MacAdam 3step | SPHWAHDNK27Yzt3D1 |                   |                            |                                  |                                           |
| 5000                                                                                                  |     | MacAdam 3step | SPHWAHDNK27YzR3M5 | 3077              | 124                        |                                  |                                           |
|                                                                                                       |     |               | SPHWAHDNK27YzR3D1 | 3231              | 130                        |                                  |                                           |



LC026D Gen 1

Chip-on-Board LEDs

Component

| Product                                                                                             | CRI  | CCT (K)       | Color rank        | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-----------------------------------------------------------------------------------------------------|------|---------------|-------------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                     |      |               |                   |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC040D Gen 1 | 80+  | 2700          | MacAdam 2step     | SPHWAHDNG25YZW2K0 | 4996                       | 134                              | 1080mA<br>34.6V                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZW3K0 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG25YZW2D1 | 5246                       | 140                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZW3D1 |                            |                                  |                                           |
|                                                                                                     |      | 3000          | MacAdam 2step     | SPHWAHDNG25YZV2K2 | 5257                       | 141                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZV3K2 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG25YZV2D1 | 5520                       | 148                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZV3D1 |                            |                                  |                                           |
|                                                                                                     |      | 3500          | MacAdam 2step     | SPHWAHDNG25YZU2K3 | 5418                       | 145                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZU3K3 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG25YZU2D1 | 5689                       | 152                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZU3D1 |                            |                                  |                                           |
|                                                                                                     |      | 4000          | MacAdam 2step     | SPHWAHDNG25YZT2K3 | 5535                       | 148                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZT3K3 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG25YZT2D1 | 5812                       | 156                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG25YZT3D1 |                            |                                  |                                           |
|                                                                                                     | 5000 | MacAdam 3step | SPHWAHDNG25YZR3K4 | 5561              | 149                        |                                  |                                           |
|                                                                                                     |      |               | SPHWAHDNG25YZR3D1 | 5839              | 156                        |                                  |                                           |
|                                                                                                     | 5700 | MacAdam 3step | SPHWAHDNG25YZQ3K4 | 5588              | 150                        |                                  |                                           |
|                                                                                                     |      |               | SPHWAHDNG25YZQ3D1 | 5868              | 157                        |                                  |                                           |
|                                                                                                     | 6500 | MacAdam 3step | SPHWAHDNG25YZP3K3 | 5528              | 148                        |                                  |                                           |
|                                                                                                     |      |               | SPHWAHDNG25YZP3D1 | 5804              | 155                        |                                  |                                           |
|                                                                                                     | 90+  | 2700          | MacAdam 2step     | SPHWAHDNG27YZW2J6 | 4283                       | 115                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZW3J6 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG27YZW2D1 | 4497                       | 120                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZW3D1 |                            |                                  |                                           |
|                                                                                                     |      | 3000          | MacAdam 2step     | SPHWAHDNG27YZV2J7 | 4525                       | 121                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZV3J7 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG27YZV2D1 | 4751                       | 127                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZV3D1 |                            |                                  |                                           |
|                                                                                                     |      | 3500          | MacAdam 2step     | SPHWAHDNG27YZU2J8 | 4640                       | 124                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZU3J8 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG27YZU2D1 | 4872                       | 130                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZU3D1 |                            |                                  |                                           |
|                                                                                                     |      | 4000          | MacAdam 2step     | SPHWAHDNG27YZT2J8 | 4742                       | 127                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZT3J8 |                            |                                  |                                           |
|                                                                                                     |      |               | MacAdam 2step     | SPHWAHDNG27YZT2D1 | 4979                       | 133                              |                                           |
|                                                                                                     |      |               | MacAdam 3step     | SPHWAHDNG27YZT3D1 |                            |                                  |                                           |
|                                                                                                     | 5000 | MacAdam 3step | SPHWAHDNG27YZR3J8 | 4796              | 128                        |                                  |                                           |
|                                                                                                     |      |               | SPHWAHDNG27YZR3D1 | 5036              | 135                        |                                  |                                           |

Chip-on-Board LEDs

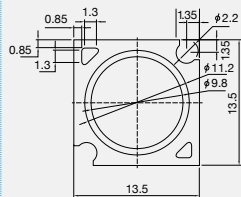
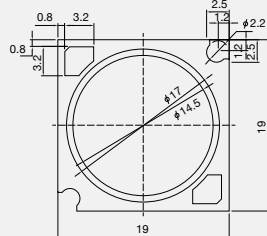
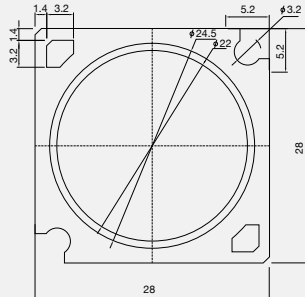
Component

| Product                                                                                               | CRI | CCT (K) | Color rank    | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-------------------------------------------------------------------------------------------------------|-----|---------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                       |     |         |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC060D Gen 1   | 70+ | 3000    | MacAdam 3step | SPHWAHDNL231ZV3Q8 | 8284                       | 148                              | 1080mA<br>52V                             |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNL231ZT3R1 | 8550                       | 152                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNL231ZR3R2 | 8683                       | 155                              |                                           |
|                                                                                                       | 80+ | 2700    | MacAdam 2step | SPHWAHDNL251ZW2P9 | 7277                       | 130                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNL251ZW3P9 |                            |                                  |                                           |
|                                                                                                       |     | 3000    | MacAdam 2step | SPHWAHDNL251ZV2Q3 | 7667                       | 137                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNL251ZV3Q3 |                            |                                  |                                           |
|                                                                                                       |     | 3500    | MacAdam 2step | SPHWAHDNL251ZU2Q5 | 7904                       | 141                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNL251ZU3Q5 |                            |                                  |                                           |
|                                                                                                       |     | 4000    | MacAdam 2step | SPHWAHDNL251ZT2Q6 | 8075                       | 144                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNL251ZT3Q6 |                            |                                  |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNL251ZR3Q7 | 8113                       | 144                              |                                           |
|                                                                                                       |     | 5700    | MacAdam 3step | SPHWAHDNL251ZQ3Q7 | 8151                       | 145                              |                                           |
|                                                                                                       |     | 6500    | MacAdam 3step | SPHWAHDNL271ZP3Q6 | 8066                       | 144                              |                                           |
| <br>LC080D Gen 1 | 70+ | 3000    | MacAdam 3step | SPHWAHDNM231ZV3U5 | 12084                      | 143                              | 1620mA<br>52V                             |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNM231ZT3U9 | 12483                      | 148                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNM231ZR3V0 | 12673                      | 150                              |                                           |
|                                                                                                       | 80+ | 2700    | MacAdam 2step | SPHWAHDNM251ZW2T1 | 10612                      | 126                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNM251ZW3T1 |                            |                                  |                                           |
|                                                                                                       |     | 3000    | MacAdam 2step | SPHWAHDNM251ZV2T6 | 11201                      | 133                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNM251ZV3T6 |                            |                                  |                                           |
|                                                                                                       |     | 3500    | MacAdam 2step | SPHWAHDNM251ZU2T9 | 11533                      | 137                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNM251ZU3T9 |                            |                                  |                                           |
|                                                                                                       |     | 4000    | MacAdam 2step | SPHWAHDNM251ZT2U2 | 11780                      | 140                              |                                           |
|                                                                                                       |     |         | MacAdam 3step | SPHWAHDNM251ZT3U2 |                            |                                  |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNM251ZR3U2 | 11847                      | 141                              |                                           |
|                                                                                                       |     | 5700    | MacAdam 3step | SPHWAHDNM251ZQ3V0 | 11904                      | 141                              |                                           |
|                                                                                                       |     | 6500    | MacAdam 3step | SPHWAHDNM251ZP3V5 | 11723                      | 139                              |                                           |

D-series Premium color - High CRI

Full line-up for major applications: ultra high CRI for spot & down lights

- Ultra High CRI (Ra 95+): Typ. R9 > 95
- Excellent color index distribution

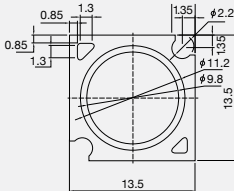
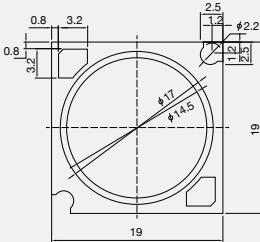
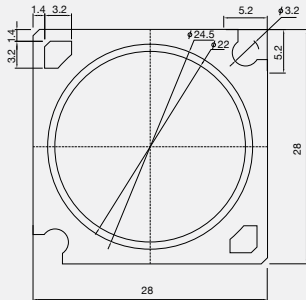
| T <sub>j</sub> =85°C | LC013D                                                                              | LC016D                                                                              | LC019D            | LC026D            | LC033D            | LC040D                                                                                |
|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|---------------------------------------------------------------------------------------|
|                      |   |   |                   |                   |                   |   |
| LES                  | 9.8mm                                                                               | 14.5mm                                                                              |                   |                   |                   | 22 mm                                                                                 |
| Typical              | 34.6 V                                                                              |                                                                                     |                   |                   |                   |                                                                                       |
|                      | 12.5W<br>(360mA)                                                                    | 15.6W<br>(450mA)                                                                    | 18.7W<br>(540mA)  | 24.9W<br>(720mA)  | 31.1W<br>(900mA)  | 37.4W<br>(1080mA)                                                                     |
| Max.                 | 34.5W<br>(920mA)                                                                    | 43.1W<br>(1150mA)                                                                   | 51.8W<br>(1380mA) | 69.0W<br>(1840mA) | 86.2W<br>(2300mA) | 103.5W<br>(2760mA)                                                                    |
| Dimension            |  |  |                   |                   |                   |  |
| Size                 | 13.5mm x 13.5mm                                                                     | 19mm x 19mm                                                                         |                   |                   |                   | 28mm x 28mm                                                                           |

| Product                                                                                                          | CRI | CCT (K) | Color rank    | Part Number       | T <sub>j</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|------------------------------------------------------------------------------------------------------------------|-----|---------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                                  |     |         |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC013D<br>Premium color   | 95+ | 2700    | MacAdam 2step | SPHWAHDND28YZW2D2 | 1223                       | 98                               | 360mA<br>34.6V                            |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDND28YZW3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3000    | MacAdam 2step | SPHWAHDND28YZV2D2 | 1285                       | 103                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDND28YZV3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3500    | MacAdam 2step | SPHWAHDND28YZU2D2 | 1337                       | 107                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDND28YZU3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 4000    | MacAdam 2step | SPHWAHDND28YZT2D2 | 1379                       | 111                              |                                           |
| <br>LC016D<br>Premium color   | 95+ |         | MacAdam 3step | SPHWAHDND28YZT3D2 | 1390                       | 112                              | 450mA<br>34.6V                            |
|                                                                                                                  |     | 5000    | MacAdam 3step | SPHWAHDND28YZR3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 2700    | MacAdam 2step | SPHWAHDNE28YZW2D2 | 1575                       | 101                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNE28YZW3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3000    | MacAdam 2step | SPHWAHDNE28YZV2D2 | 1655                       | 106                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNE28YZV3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3500    | MacAdam 2step | SPHWAHDNE28YZU2D2 | 1722                       | 111                              |                                           |
| <br>LC019D<br>Premium color | 95+ |         | MacAdam 3step | SPHWAHDNE28YZU3D2 | 1776                       | 114                              | 540mA<br>34.6V                            |
|                                                                                                                  |     | 5000    | MacAdam 3step | SPHWAHDNE28YZT2D2 |                            |                                  |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNE28YZT3D2 | 1791                       | 115                              |                                           |
|                                                                                                                  |     | 2700    | MacAdam 2step | SPHWAHDNE28YZR3D2 |                            |                                  |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNE28YZW2D2 | 1880                       | 101                              |                                           |
|                                                                                                                  |     | 3000    | MacAdam 2step | SPHWAHDNF28YZV2D2 | 1976                       | 106                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNF28YZV3D2 |                            |                                  |                                           |
| <br>LC026D<br>Premium color | 95+ | 3500    | MacAdam 2step | SPHWAHDNF28YZU2D2 | 2056                       | 110                              | 720mA<br>34.6V                            |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNF28YZU3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 4000    | MacAdam 2step | SPHWAHDNF28YZT2D2 | 2121                       | 114                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNF28YZT3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 5000    | MacAdam 3step | SPHWAHDNF28YZR3D2 | 2138                       | 114                              |                                           |
|                                                                                                                  |     | 2700    | MacAdam 2step | SPHWAHDNG28YZW2D2 | 2470                       | 99                               |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNG28YZW3D2 |                            |                                  |                                           |
| <br>LC033D<br>Premium color | 95+ | 3000    | MacAdam 2step | SPHWAHDNG28YZV2D2 | 2596                       | 104                              | 900mA<br>34.6V                            |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNG28YZV3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3500    | MacAdam 2step | SPHWAHDNG28YZU2D2 | 2701                       | 108                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNG28YZU3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 4000    | MacAdam 2step | SPHWAHDNG28YZT2D2 | 2786                       | 112                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNG28YZT3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 5000    | MacAdam 3step | SPHWAHDNG28YZR3D2 | 2809                       | 113                              |                                           |
| <br>LC040D<br>Premium color | 95+ | 2700    | MacAdam 2step | SPHWAHDNH28YZW2D2 | 3057                       | 98                               | 1080mA<br>34.6V                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNH28YZW3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3000    | MacAdam 2step | SPHWAHDNH28YZV2D2 | 3212                       | 103                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNH28YZV3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3500    | MacAdam 2step | SPHWAHDNH28YZU2D2 | 3343                       | 107                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNH28YZU3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 4000    | MacAdam 2step | SPHWAHDNH28YZT2D2 | 3447                       | 111                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNH28YZT3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 5000    | MacAdam 3step | SPHWAHDNH28YZR3D2 | 3476                       | 112                              |                                           |
|                                                                                                                  |     | 2700    | MacAdam 2step | SPHWAHDNK28YZW2D2 | 3760                       | 101                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNK28YZW3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3000    | MacAdam 2step | SPHWAHDNK28YZV2D2 | 3952                       | 106                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNK28YZV3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 3500    | MacAdam 2step | SPHWAHDNK28YZU2D2 | 4113                       | 110                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNK28YZU3D2 |                            |                                  | 1080mA<br>34.6V                           |
|                                                                                                                  |     | 4000    | MacAdam 2step | SPHWAHDNK28YZT2D2 | 4241                       | 113                              |                                           |
|                                                                                                                  |     |         | MacAdam 3step | SPHWAHDNK28YZT3D2 |                            |                                  |                                           |
|                                                                                                                  |     | 5000    | MacAdam 3step | SPHWAHDNK28YZR3D2 | 4277                       | 114                              |                                           |

D-series Premium color - Vivid color

Much more vivid colors for displaying & attractive object appearance for human eye perception

- Vivid white without yellowish tint
- Attractive color for human eye perception
- The chromaticity of vivid color COB - below B.B.L

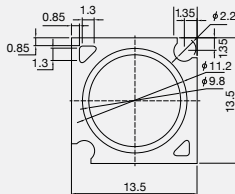
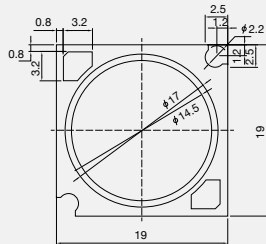
| T <sub>j</sub> =85°C | LC013D                                                                              | LC016D                                                                              | LC019D            | LC026D            | LC033D                                                                                | LC040D             |
|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------|-------------------|---------------------------------------------------------------------------------------|--------------------|
|                      |  |   |                   |                   |   |                    |
| LES                  | 9.8mm                                                                               | 14.5mm                                                                              |                   |                   | 22mm                                                                                  |                    |
| Typical              | 34.6 V                                                                              |                                                                                     |                   |                   |                                                                                       |                    |
|                      | 12.5W<br>(360mA)                                                                    | 15.6W<br>(450mA)                                                                    | 18.7W<br>(540mA)  | 24.9W<br>(720mA)  | 31.1W<br>(900mA)                                                                      | 37.4W<br>(1080mA)  |
| Max.                 | 34.5W<br>(920mA)                                                                    | 43.1W<br>(1150mA)                                                                   | 51.8W<br>(1380mA) | 69.0W<br>(1840mA) | 86.2W<br>(2300mA)                                                                     | 103.5W<br>(2760mA) |
| Dimension            |  |  |                   |                   |  |                    |
| Size                 | 13.5mm x 13.5mm                                                                     | 19mm x 19mm                                                                         |                   |                   | 28mm x 28mm                                                                           |                    |

| Product                                                                                                          | CRI         | CCT (K)             | Color rank    | Part Number       | T <sub>j</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|------------------------------------------------------------------------------------------------------------------|-------------|---------------------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                                  |             |                     |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC013D<br>Premium color   | Vivid color | 3000<br>(Below BBL) | MacAdam 2step | SPHWAHDND2VYZV2D2 | 1334                       | 107                              | 360mA<br>34.6V                            |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDND2VYZVVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3300<br>(Below BBL) | MacAdam 2step | SPHWAHDND2VYZA2D2 | 1394                       | 112                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDND2VYZAVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3500<br>(Below BBL) | MacAdam 2step | SPHWAHDND2VYZU2D2 | 1433                       | 115                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDND2VYZUVD2 |                            |                                  |                                           |
| <br>LC016D<br>Premium color   | Vivid color | 4000<br>(Below BBL) | MacAdam 2step | SPHWAHDND2VYZT2D2 | 1533                       | 123                              | 450mA<br>34.6V                            |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDND2VYZTVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3000<br>(Below BBL) | MacAdam 2step | SPHWAHDNE2VYZ2VD2 | 1745                       | 112                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNE2VYZVVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3300<br>(Below BBL) | MacAdam 2step | SPHWAHDNE2VYZA2D2 | 1823                       | 117                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNE2VYZAVD2 |                            |                                  |                                           |
| <br>LC019D<br>Premium color  | Vivid color | 3500<br>(Below BBL) | MacAdam 2step | SPHWAHDNE2VYZU2D2 | 1875                       | 120                              | 540mA<br>34.6V                            |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNE2VYZUVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 4000<br>(Below BBL) | MacAdam 2step | SPHWAHDNE2VYZT2D2 | 2005                       | 129                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNE2VYZTVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3000<br>(Below BBL) | MacAdam 2step | SPHWAHDNF2VYZV2D2 | 2068                       | 111                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNF2VYZVVD2 |                            |                                  |                                           |
| <br>LC026D<br>Premium color | Vivid color | 3300<br>(Below BBL) | MacAdam 2step | SPHWAHDNF2VYZA2D2 | 2160                       | 116                              | 720mA<br>34.6V                            |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNF2VYZAVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3500<br>(Below BBL) | MacAdam 2step | SPHWAHDNF2VYZU2D2 | 2222                       | 119                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNF2VYZUVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 4000<br>(Below BBL) | MacAdam 2step | SPHWAHDNF2VYZT2D2 | 2376                       | 127                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNF2VYZTVD2 |                            |                                  |                                           |
| <br>LC033D<br>Premium color | Vivid color | 3000<br>(Below BBL) | MacAdam 2step | SPHWAHDNG2VYZV2D2 | 2706                       | 109                              | 900mA<br>34.6V                            |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNG2VYZVVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3300<br>(Below BBL) | MacAdam 2step | SPHWAHDNG2VYZA2D2 | 2827                       | 113                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNG2VYZAVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3500<br>(Below BBL) | MacAdam 2step | SPHWAHDNG2VYZU2D2 | 2907                       | 117                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNG2VYZUVD2 |                            |                                  |                                           |
| <br>LC040D<br>Premium color | Vivid color | 4000<br>(Below BBL) | MacAdam 2step | SPHWAHDNG2VYZT2D2 | 3108                       | 125                              | 1080mA<br>34.6V                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNG2VYZTVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3000<br>(Below BBL) | MacAdam 2step | SPHWAHDNH2VYZV2D2 | 3339                       | 107                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNH2VYZVVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3300<br>(Below BBL) | MacAdam 2step | SPHWAHDNH2VYZA2D2 | 3488                       | 112                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNH2VYZAVD2 |                            |                                  |                                           |
| <br>LC040D<br>Premium color | Vivid color | 3500<br>(Below BBL) | MacAdam 2step | SPHWAHDNH2VYZU2D2 | 3588                       | 115                              | 1080mA<br>34.6V                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNH2VYZUVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 4000<br>(Below BBL) | MacAdam 2step | SPHWAHDNH2VYZT2D2 | 3836                       | 123                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNH2VYZTVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3000<br>(Below BBL) | MacAdam 2step | SPHWAHDNK2VYZV2D2 | 4150                       | 111                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNK2VYZVVD2 |                            |                                  |                                           |
| <br>LC040D<br>Premium color | Vivid color | 3300<br>(Below BBL) | MacAdam 2step | SPHWAHDNK2VYZA2D2 | 4335                       | 116                              | 1080mA<br>34.6V                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNK2VYZAVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 3500<br>(Below BBL) | MacAdam 2step | SPHWAHDNK2VYZU2D2 | 4459                       | 119                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNK2VYZUVD2 |                            |                                  |                                           |
|                                                                                                                  |             | 4000<br>(Below BBL) | MacAdam 2step | SPHWAHDNK2VYZT2D2 | 4768                       | 128                              |                                           |
|                                                                                                                  |             |                     | MacAdam 3step | SPHWAHDNK2VYZTVD2 |                            |                                  |                                           |

D-series Premium color - Special color

Much more vivid colors for displaying & attractive object appearance for human eye perception

- Fashion light effect: Clean, Elegant, Vivid
- Meat light effect: Fresh (Red), Delicious (Red), Vivid
- Vegetable light effect: Fresh, Delicious, Vivid

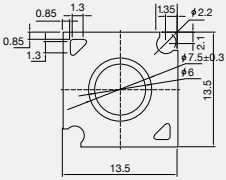
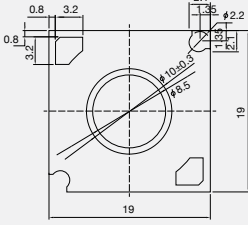
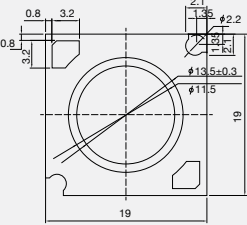
| T <sub>j</sub> =85°C | LC013D                                                                              | LC016D                                                                               | LC019D            | LC026D            | LC033D            |
|----------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|
|                      |   |   |                   |                   |                   |
| LES                  | 9.8mm                                                                               | 14.5mm                                                                               |                   |                   |                   |
| Typical              | 34.6 V                                                                              |                                                                                      |                   |                   |                   |
|                      | 12.5W<br>(360mA)                                                                    | 15.6W<br>(450mA)                                                                     | 18.7W<br>(540mA)  | 24.9W<br>(720mA)  | 31.1W<br>(900mA)  |
| Max.                 | 34.5W<br>(920mA)                                                                    | 43.1W<br>(1150mA)                                                                    | 51.8W<br>(1380mA) | 69.0W<br>(1840mA) | 86.2W<br>(2300mA) |
| Dimension            |  |  |                   |                   |                   |
| Size                 | 13.5mm x 13.5mm                                                                     | 19mm x 19mm                                                                          |                   |                   |                   |

| Product                                                                                                          | CRI              | CCT (K)   | Color rank    | Part Number       | T <sub>j</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|------------------------------------------------------------------------------------------------------------------|------------------|-----------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                                  |                  |           |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC013D<br>Premium color   | Special<br>color | Fashion   | MacAdam 2step | SPHWAHDND2VYZUSD2 | 1085                       | 1142                             | 360mA<br>34.6V                            |
|                                                                                                                  |                  | Meat      | MacAdam 2step | SPHWAHDND2VYZTSD2 | 868                        | 914                              |                                           |
|                                                                                                                  |                  | Vegetable | MacAdam 2step | SPHWAHDND2VYZRSD2 | 1128                       | 1188                             |                                           |
| <br>LC016D<br>Premium color   | Special<br>color | Fashion   | MacAdam 2step | SPHWAHDNE2VYZUSD2 | 1411                       | 1485                             | 450mA<br>34.6V                            |
|                                                                                                                  |                  | Meat      | MacAdam 2step | SPHWAHDNE2VYZTSD2 | 1129                       | 1188                             |                                           |
|                                                                                                                  |                  | Vegetable | MacAdam 2step | SPHWAHDNE2VYZRSD2 | 1467                       | 1544                             |                                           |
| <br>LC019D<br>Premium color | Special<br>color | Fashion   | MacAdam 2step | SPHWAHDNF2VYZUSD2 | 1677                       | 1765                             | 540mA<br>34.6V                            |
|                                                                                                                  |                  | Meat      | MacAdam 2step | SPHWAHDNF2VYZTSD2 | 1341                       | 1412                             |                                           |
|                                                                                                                  |                  | Vegetable | MacAdam 2step | SPHWAHDNF2VYZRSD2 | 1744                       | 1835                             |                                           |
| <br>LC026D<br>Premium color | Special<br>color | Fashion   | MacAdam 2step | SPHWAHDNG2VYZUSD2 | 2192                       | 2307                             | 720mA<br>34.6V                            |
|                                                                                                                  |                  | Meat      | MacAdam 2step | SPHWAHDNG2VYZTSD2 | 1753                       | 1845                             |                                           |
|                                                                                                                  |                  | Vegetable | MacAdam 2step | SPHWAHDNG2VYZRSD2 | 2279                       | 2399                             |                                           |
| <br>LC033D<br>Premium color | Special<br>color | Fashion   | MacAdam 2step | SPHWAHDNH2VYZUSD2 | 2712                       | 2855                             | 900mA<br>34.6V                            |
|                                                                                                                  |                  | Meat      | MacAdam 2step | SPHWAHDNH2VYZTSD2 | 2170                       | 2284                             |                                           |
|                                                                                                                  |                  | Vegetable | MacAdam 2step | SPHWAHDNH2VYZRSD2 | 2820                       | 2969                             |                                           |

C-series Gen 2 [Small LES COB]

Suitable for narrow beam spot lights and downlights

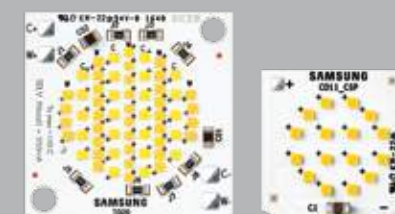
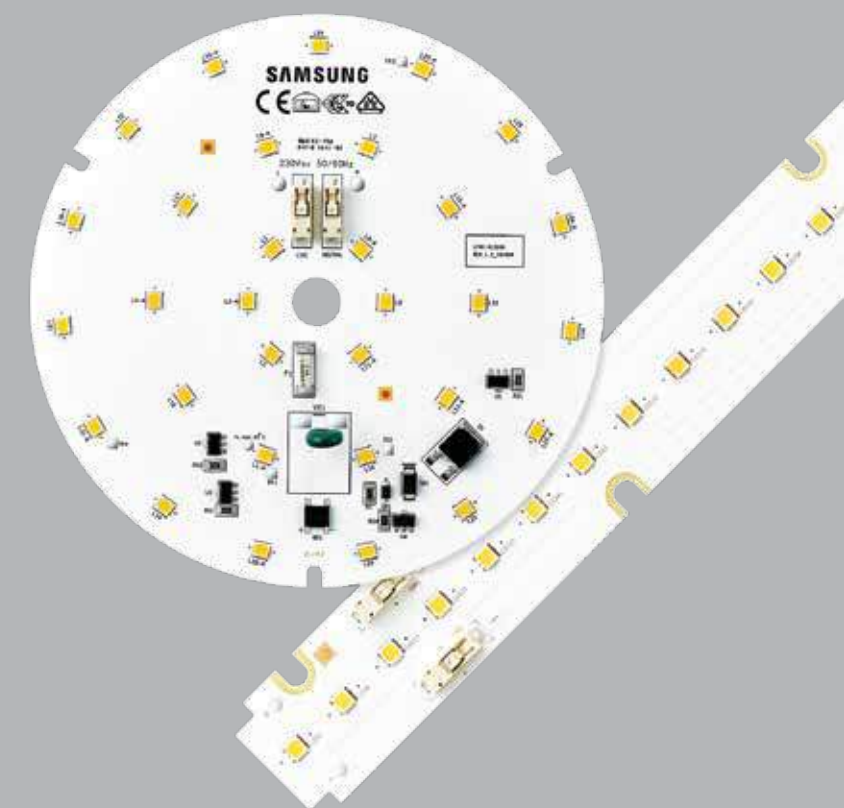
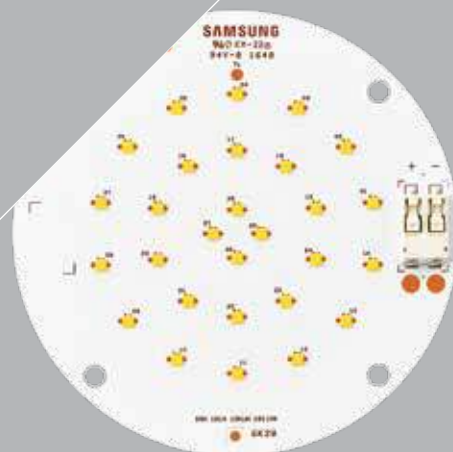
- Uses new flip chip technology
- Low droop to improve current and thermal performance
- High reliability
- Completed 6,000 hours of LM-80 testing

| T <sub>J</sub> =85°C | LC010C Gen 2                                                                        | LC020C Gen 2                                                                        | LC030C Gen 2                                                                         | LC040C Gen 2      |
|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------|
|                      |   |   |  |                   |
| LES                  | 6.0mm                                                                               | 8.5mm                                                                               | 11.5mm                                                                               |                   |
| Typical              | 35.0V                                                                               |                                                                                     |                                                                                      |                   |
|                      | 10.5W<br>(300mA)                                                                    | 21.0W<br>(600mA)                                                                    | 31.5W<br>(900mA)                                                                     | 36.8W<br>(1050mA) |
| Max.                 | 13.8W<br>(380mA)                                                                    | 34.0W<br>(920mA)                                                                    | 51.1W<br>(1380mA)                                                                    | 59.5W<br>(1610mA) |
| Dimension            |  |  |  |                   |
| Size                 | 13.5mm x 13.5mm                                                                     | 19mm x 19mm                                                                         | 19mm x 19mm                                                                          |                   |

| Product                                                                                               | CRI | CCT (K) | Color rank    | Part Number       | T <sub>J</sub> =85°C       |                                  | I <sub>F</sub> (mA)<br>V <sub>F</sub> (V) |
|-------------------------------------------------------------------------------------------------------|-----|---------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------------|
|                                                                                                       |     |         |               |                   | Luminous Flux<br>Typ. (lm) | Luminous Efficacy<br>Typ. (lm/W) |                                           |
| <br>LC010C Gen 2   | 80+ | 2700    | MacAdam 3step | SPHWAHDNC25YZW3C2 | 1212                       | 115                              | 300mA<br>35.0V                            |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNC25YZV3C2 | 1274                       | 121                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNC25YZU3C2 | 1311                       | 125                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNC25YZT3C2 | 1337                       | 127                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNC25YZR3C2 | 1348                       | 128                              |                                           |
|                                                                                                       | 90+ | 2700    | MacAdam 3step | SPHWAHDNC27YZW3C2 | 1037                       | 99                               |                                           |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNC27YZV3C2 | 1091                       | 104                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNC27YZU3C2 | 1123                       | 107                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNC27YZT3C2 | 1147                       | 109                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNC27YZR3C2 | 1156                       | 110                              |                                           |
| <br>LC020C Gen 2  | 80+ | 2700    | MacAdam 3step | SPHWAHDNF25YZW3C2 | 2485                       | 118                              | 600mA<br>35.0V                            |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNF25YZV3C2 | 2625                       | 125                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNF25YZU3C2 | 2688                       | 128                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNF25YZT3C2 | 2742                       | 131                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNF25YZR3C2 | 2765                       | 132                              |                                           |
|                                                                                                       | 90+ | 2700    | MacAdam 3step | SPHWAHDNF27YZW3C2 | 2127                       | 101                              |                                           |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNF27YZV3C2 | 2237                       | 107                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNF27YZU3C2 | 2304                       | 110                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNF27YZT3C2 | 2351                       | 112                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNF27YZR3C2 | 2372                       | 113                              |                                           |
| <br>LC030C Gen 2 | 80+ | 2700    | MacAdam 3step | SPHWAHDNH25YZW3C2 | 3765                       | 120                              | 900mA<br>35.0V                            |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNH25YZV3C2 | 3956                       | 126                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNH25YZU3C2 | 4072                       | 129                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNH25YZT3C2 | 4154                       | 132                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNH25YZR3C2 | 4188                       | 133                              |                                           |
|                                                                                                       | 90+ | 2700    | MacAdam 3step | SPHWAHDNH27YZW3C2 | 3222                       | 102                              |                                           |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNH27YZV3C2 | 3389                       | 108                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNH27YZU3C2 | 3490                       | 111                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNH27YZT3C2 | 3562                       | 113                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNH27YZR3C2 | 3592                       | 114                              |                                           |
| <br>LC040C Gen 2 | 80+ | 2700    | MacAdam 3step | SPHWAHDNK25YZW3C2 | 4305                       | 117                              | 1050mA<br>35.0V                           |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNK25YZV3C2 | 4524                       | 123                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNK25YZU3C2 | 4657                       | 127                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNK25YZT3C2 | 4750                       | 129                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNK25YZR3C2 | 4790                       | 130                              |                                           |
|                                                                                                       | 90+ | 2700    | MacAdam 3step | SPHWAHDNK27YZW3C2 | 3684                       | 100                              |                                           |
|                                                                                                       |     | 3000    | MacAdam 3step | SPHWAHDNK27YZV3C2 | 3875                       | 105                              |                                           |
|                                                                                                       |     | 3500    | MacAdam 3step | SPHWAHDNK27YZU3C2 | 3991                       | 109                              |                                           |
|                                                                                                       |     | 4000    | MacAdam 3step | SPHWAHDNK27YZT3C2 | 4073                       | 111                              |                                           |
|                                                                                                       |     | 5000    | MacAdam 3step | SPHWAHDNK27YZR3C2 | 4108                       | 112                              |                                           |

# Module

Samsung LED



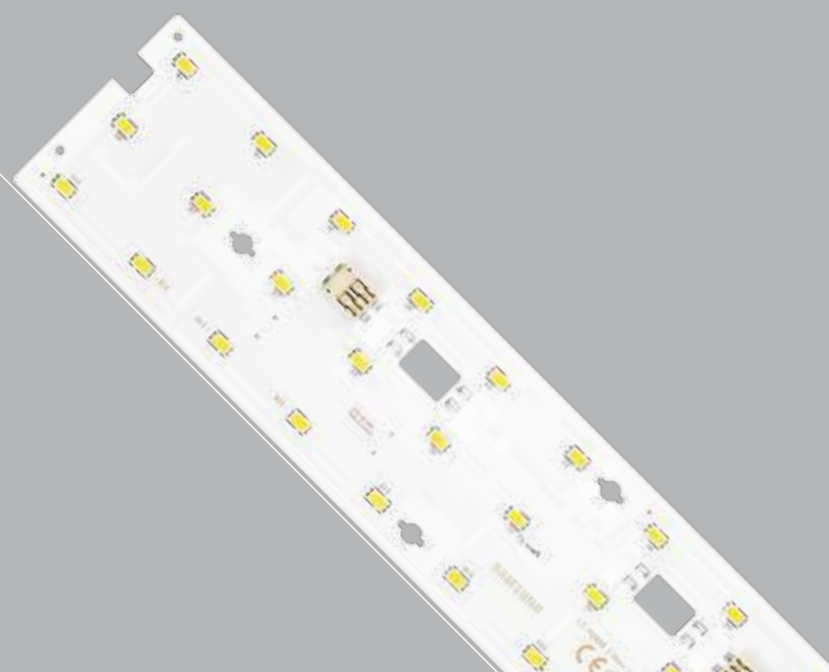
Indoor Linear Light

Industrial Light

Indoor Area Light

Down & Spot Light

Outdoor Light





With their modular construction, easy-to-use connections and optimal color consistency, Samsung’s linear module line-ups are well-suited for a wide variety of luminaires.

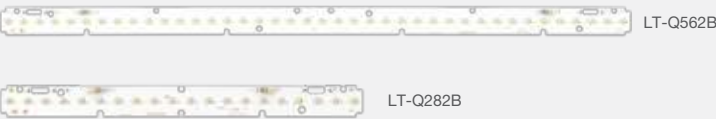
- Tight color binning for best color consistency and high uniformity
- Modular design flexibility makes a wide variety of luminaire designs possible
- Peace of mind with Samsung-backed quality and performance

| Product                                                                                      | Key Features                                                                                                           | Efficacy (lm/W) | Lifespan |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
|  Q-series | <ul style="list-style-type: none"><li>• Highest performance</li><li>• 203lm/W [4000K, CRI 80+, Tp 40°C]</li></ul>      | ●●●●●           | ●●●●●    |
|  H-series | <ul style="list-style-type: none"><li>• High performance</li><li>• 187lm/W [4000K, CRI 80+, Tp 40°C]</li></ul>         | ●●●●○           | ●●●●○    |
|  M-series | <ul style="list-style-type: none"><li>• Flexible design choices</li><li>• High efficacy up to 165lm/W @4000K</li></ul> | ●●●○○           | ●●●○○    |
|  S-series | <ul style="list-style-type: none"><li>• High voltage solution</li><li>• 170lm/W [4000K, CRI 80+, Tp 50°C]</li></ul>    | ●●●○○           | ●●●○○    |
|  V-series | <ul style="list-style-type: none"><li>• Value solution</li><li>• 146lm/W [4000K, CRI80+, Tp 50°C]</li></ul>            | ●●●○○           | ●●●○○    |
|  T-series | <ul style="list-style-type: none"><li>• White tunable solution with color temperatures from 2700K to 6500K</li></ul>   | ●●○○○           | ●●○○○    |

Q-series



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)   | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-------------|------------------------|-----------------|---------------|----------------|
| LT-QB22A | 3680               | 19.7                  | 43.8              | 450     | 900       | 187             | 80+ | 3000    | 115            | 1120x18x5.2 | -20~+50                | 50000           | cUL, UL       | SI-B8V201B20US |
|          | 3900               |                       |                   |         |           | 198             |     | 3500    |                |             |                        |                 |               | SI-B8U201B20US |
|          | 4000               |                       |                   |         |           | 203             |     | 4000    |                |             |                        |                 |               | SI-B8T201B20US |
|          | 4100               |                       |                   |         |           | 208             |     | 5000    |                |             |                        |                 |               | SI-B8R201B20US |
| LT-Q562A | 1840               | 9.9                   | 21.9              | 450     | 900       | 187             | 80+ | 3000    | 115            | 560x18x5.8  | -20~+50                | 50000           | cUL, UL       | SI-B8V101560US |
|          | 1950               |                       |                   |         |           | 198             |     | 3500    |                |             |                        |                 |               | SI-B8U101560US |
|          | 2000               |                       |                   |         |           | 203             |     | 4000    |                |             |                        |                 |               | SI-B8T101560US |
|          | 2050               |                       |                   |         |           | 208             |     | 5000    |                |             |                        |                 |               | SI-B8R101560US |
| LT-Q282A | 920                | 4.9                   | 10.9              | 450     | 900       | 187             | 80+ | 3000    | 115            | 275x18x5.8  | -20~+50                | 50000           | cUL, UL       | SI-B8V051280US |
|          | 975                |                       |                   |         |           | 198             |     | 3500    |                |             |                        |                 |               | SI-B8U051280US |
|          | 1000               |                       |                   |         |           | 203             |     | 4000    |                |             |                        |                 |               | SI-B8T051280US |
|          | 1025               |                       |                   |         |           | 208             |     | 5000    |                |             |                        |                 |               | SI-B8R051280US |

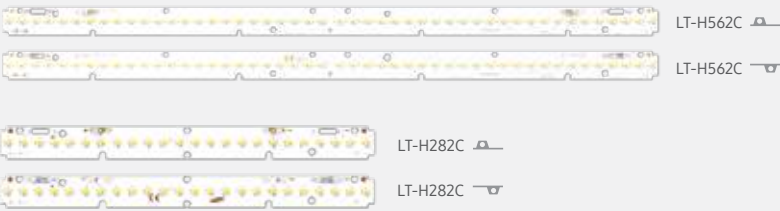


| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-Q562B | 1840               | 9.9                   | 54.8              | 180     | 360       | 187             | 80+ | 3000    | 115            | 560x24x5.2 | -20~+50                | 50000           | CE, ENEC      | SI-B8V103560EU |
|          | 2000               |                       |                   |         |           | 203             |     | 4000    |                |            |                        |                 |               | SI-B8T103560EU |
|          | 2000               |                       |                   |         |           | 203             |     | 6500    |                |            |                        |                 |               | SI-B8P103560EU |
| LT-Q282B | 920                | 4.9                   | 27.4              | 180     | 360       | 187             | 80+ | 3000    | 115            | 280x24x5.2 | -20~+50                | 50000           | CE, ENEC      | SI-B8V053280EU |
|          | 1000               |                       |                   |         |           | 203             |     | 4000    |                |            |                        |                 |               | SI-B8T053280EU |
|          | 1000               |                       |                   |         |           | 203             |     | 6500    |                |            |                        |                 |               | SI-B8P053280EU |

H-series



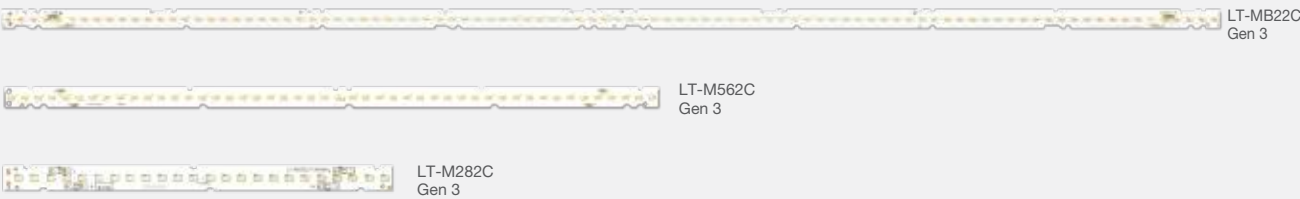
| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)   | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-------------|------------------------|-----------------|---------------|----------------|
| LT-HB22D | 3870               | 21.6                  | 22.5              | 960     | 2400      | 179             | 80+ | 3000    | 115            | 1120x18x5.8 | -20~+50                | 50000           | cUL, UL       | SI-B8V221B2HUS |
|          | 3925               |                       |                   |         |           | 182             |     | 3500    |                |             |                        |                 |               | SI-B8U221B2HUS |
|          | 4040               |                       |                   |         |           | 187             |     | 4000    |                |             |                        |                 |               | SI-B8T221B2HUS |
|          | 4040               |                       |                   |         |           | 187             |     | 5000    |                |             |                        |                 |               | SI-B8R221B2HUS |
| LT-H562D | 1935               | 10.8                  | 22.5              | 480     | 1200      | 179             | 80+ | 3000    | 115            | 560x18x5.8  | -20~+50                | 50000           | cUL, UL       | SI-B8V11156HUS |
|          | 1965               |                       |                   |         |           | 182             |     | 3500    |                |             |                        |                 |               | SI-B8U11156HUS |
|          | 2020               |                       |                   |         |           | 187             |     | 4000    |                |             |                        |                 |               | SI-B8T11156HUS |
|          | 2020               |                       |                   |         |           | 187             |     | 5000    |                |             |                        |                 |               | SI-B8R11156HUS |
| LT-H282D | 970                | 5.4                   | 22.5              | 240     | 600       | 180             | 80+ | 3000    | 115            | 275x18x5.8  | -20~+50                | 50000           | cUL, UL       | SI-B8V05128HUS |
|          | 980                |                       |                   |         |           | 181             |     | 3500    |                |             |                        |                 |               | SI-B8U05128HUS |
|          | 1010               |                       |                   |         |           | 187             |     | 4000    |                |             |                        |                 |               | SI-B8T05128HUS |
|          | 1010               |                       |                   |         |           | 187             |     | 5000    |                |             |                        |                 |               | SI-B8R05128HUS |



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI            | CCT (K) | Beam Angle (°) | Size (mm)      | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |  |  |  |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|----------------|---------|----------------|----------------|------------------------|-----------------|---------------|----------------|--|--|--|
| LT-H562C | 1935               | 10.8                  | 45.0              | 240     | 600       | 179             | 80+            | 3000    | 115            | 559.7×23.8×5.2 | -20~+50                | 50000           | CE, ENEC      | SI-B8V11156HEU |  |  |  |
|          | 2020               |                       |                   |         |           | 187             |                | 4000    |                | 559.7×23.8×7.4 |                        |                 |               | SI-B8V11256HEU |  |  |  |
|          |                    |                       |                   |         |           | 187             |                | 6500    |                | SI-B8T11156HEU |                        |                 |               |                |  |  |  |
|          |                    |                       |                   |         |           | 187             |                | 6500    |                | SI-B8T11256HEU |                        |                 |               |                |  |  |  |
|          |                    |                       |                   |         |           | 187             |                | 6500    |                | SI-B8P11156HEU |                        |                 |               |                |  |  |  |
| LT-H282C | 970                | 5.4                   | 22.5              | 240     | 600       | 180             | 80+            | 3000    | 115            | 279.7×23.8×5.2 | -20~+50                | 50000           | CE, ENEC      | SI-B8V05128HEU |  |  |  |
|          | 1010               |                       |                   |         |           | 187             |                | 4000    |                | 279.7×23.8×7.4 |                        |                 |               | SI-B8V05228HEU |  |  |  |
|          |                    |                       |                   |         |           | 187             |                | 6500    |                | SI-B8T05128HEU |                        |                 |               |                |  |  |  |
|          |                    |                       |                   |         |           | 187             |                | 6500    |                | SI-B8T05228HEU |                        |                 |               |                |  |  |  |
|          |                    |                       |                   |         |           | 187             |                | 6500    |                | SI-B8P05128HEU |                        |                 |               |                |  |  |  |
|          |                    |                       |                   |         | 187       | 6500            | SI-B8P05228HEU |         |                |                |                        |                 |               |                |  |  |  |

\* Front wiring connector, Rear wiring connector

M-series



| Product        | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)   | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-------------|------------------------|-----------------|---------------|----------------|
| LT-MB22C Gen 3 | 5330               | 33.6                  | 24                | 1400    | 2160      | 159             | 80+ | 3000    | 115            | 1120x18x5.2 | -20~+50                | 50000           | cUL, UL       | SI-B8V341B2001 |
|                | 5400               |                       |                   |         |           | 161             |     | 3500    |                |             |                        |                 |               | SI-B8U341B2001 |
|                | 5550               |                       |                   |         |           | 165             |     | 4000    |                |             |                        |                 |               | SI-B8T341B2001 |
|                | 5550               |                       |                   |         |           | 165             |     | 5000    |                |             |                        |                 |               | SI-B8R341B2001 |
| LT-M562C Gen 3 | 2665               | 16.8                  | 24                | 700     | 1080      | 159             | 80+ | 3000    | 115            | 560x18x5.8  | -20~+50                | 50000           | cUL, UL       | SI-B8V17256001 |
|                | 2700               |                       |                   |         |           | 161             |     | 3500    |                |             |                        |                 |               | SI-B8U17256001 |
|                | 2775               |                       |                   |         |           | 165             |     | 4000    |                |             |                        |                 |               | SI-B8T17256001 |
|                | 2775               |                       |                   |         |           | 165             |     | 5000    |                |             |                        |                 |               | SI-B8R17256001 |
| LT-M282C Gen 3 | 1660               | 11.2                  | 24.8              | 450     | 540       | 149             | 80+ | 3000    | 115            | 275x18x5.8  | -20~+50                | 50000           | cUL, UL       | SI-B8V11428001 |
|                | 1680               |                       |                   |         |           | 151             |     | 3500    |                |             |                        |                 |               | SI-B8U11428001 |
|                | 1730               |                       |                   |         |           | 155             |     | 4000    |                |             |                        |                 |               | SI-B8T11428001 |
|                | 1730               |                       |                   |         |           | 155             |     | 5000    |                |             |                        |                 |               | SI-B8R11428001 |



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)   | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-------------|------------------------|-----------------|---------------|----------------|
| LT-MB22A | 3160               | 22.3                  | 24.8              | 900     | 1080      | 142             | 80+ | 3000    | 115            | 1120x18x5.2 | -20~+50                | 50000           | cUL, UL       | SI-B8V221B20WW |
|          | 3210               |                       |                   |         |           | 144             |     | 3500    |                |             |                        |                 |               | SI-B8U221B20WW |
|          | 3300               |                       |                   |         |           | 148             |     | 4000    |                |             |                        |                 |               | SI-B8T221B20WW |
|          | 3300               |                       |                   |         |           | 148             |     | 5000    |                |             |                        |                 |               | SI-B8R221B20WW |
| LT-MB22B | 4210               | 29.8                  | 24.8              | 1200    | 1440      | 141             | 80+ | 3000    | 115            | 1120x18x5.2 | -20~+50                | 50000           | cUL, UL       | SI-B8V301B20WW |
|          | 4280               |                       |                   |         |           | 144             |     | 3500    |                |             |                        |                 |               | SI-B8U301B20WW |
|          | 4400               |                       |                   |         |           | 148             |     | 4000    |                |             |                        |                 |               | SI-B8T301B20WW |
|          | 4400               |                       |                   |         |           | 148             |     | 5000    |                |             |                        |                 |               | SI-B8R301B20WW |
| LT-MB22C | 5070               | 33.6                  | 24.0              | 1400    | 2160      | 151             | 80+ | 3000    | 115            | 1120x18x5.2 | -20~+50                | 50000           | cUL, UL       | SI-B8V341B20WW |
|          | 5150               |                       |                   |         |           | 153             |     | 3500    |                |             |                        |                 |               | SI-B8U341B20WW |
|          | 5310               |                       |                   |         |           | 158             |     | 4000    |                |             |                        |                 |               | SI-B8T341B20WW |
|          | 5310               |                       |                   |         |           | 158             |     | 5000    |                |             |                        |                 |               | SI-B8R341B20WW |

Indoor Linear Light



| Product        | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-M562A Gen 2 | 1580               | 11.2                  | 24.8              | 450     | 540       | 141             | 80+ | 3000    | 115            | 560x18x5.8 | -20~+50                | 50000           | CE<br>cUL, UL | SI-B8V113560WW |
|                | 1605               |                       |                   |         |           | 144             |     | 3500    |                |            |                        |                 |               | SI-B8U113560WW |
|                | 1650               |                       |                   |         |           | 148             |     | 4000    |                |            |                        |                 |               | SI-B8T113560WW |
|                | 1650               |                       |                   |         |           | 148             |     | 5000    |                |            |                        |                 |               | SI-B8R113560WW |
| LT-M562B Gen 2 | 2105               | 14.9                  | 24.8              | 600     | 720       | 141             | 80+ | 3000    | 115            | 560x18x5.8 | -20~+50                | 50000           | CE<br>cUL, UL | SI-B8V152560WW |
|                | 2140               |                       |                   |         |           | 144             |     | 3500    |                |            |                        |                 |               | SI-B8U152560WW |
|                | 2200               |                       |                   |         |           | 148             |     | 4000    |                |            |                        |                 |               | SI-B8T152560WW |
|                | 2200               |                       |                   |         |           | 148             |     | 5000    |                |            |                        |                 |               | SI-B8R152560WW |
| LT-M562C Gen 2 | 2535               | 16.8                  | 24.0              | 700     | 1080      | 151             | 80+ | 3000    | 115            | 560x18x5.8 | -20~+50                | 50000           | CE<br>cUL, UL | SI-B8V172560WW |
|                | 2575               |                       |                   |         |           | 153             |     | 3500    |                |            |                        |                 |               | SI-B8U172560WW |
|                | 2655               |                       |                   |         |           | 158             |     | 4000    |                |            |                        |                 |               | SI-B8T172560WW |
|                | 2655               |                       |                   |         |           | 158             |     | 5000    |                |            |                        |                 |               | SI-B8R172560WW |



| Product        | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-M282A Gen 2 | 790                | 5.6                   | 12.4              | 450     | 540       | 142             | 80+ | 3000    | 115            | 275x18x5.8 | -20~+50                | 50000           | CE<br>cUL, UL | SI-B8V052280WW |
|                | 800                |                       |                   |         |           | 143             |     | 3500    |                |            |                        |                 |               | SI-B8U052280WW |
|                | 825                |                       |                   |         |           | 148             |     | 4000    |                |            |                        |                 |               | SI-B8T052280WW |
|                | 825                |                       |                   |         |           | 148             |     | 5000    |                |            |                        |                 |               | SI-B8R052280WW |
| LT-M282B Gen 2 | 1050               | 7.4                   | 24.8              | 300     | 360       | 142             | 80+ | 3000    | 115            | 275x18x5.8 | -20~+50                | 50000           | CE<br>cUL, UL | SI-B8V072280WW |
|                | 1070               |                       |                   |         |           | 144             |     | 3500    |                |            |                        |                 |               | SI-B8U072280WW |
|                | 1100               |                       |                   |         |           | 148             |     | 4000    |                |            |                        |                 |               | SI-B8T072280WW |
|                | 1100               |                       |                   |         |           | 148             |     | 5000    |                |            |                        |                 |               | SI-B8R072280WW |
| LT-M282C Gen 2 | 1580               | 11.2                  | 24.8              | 450     | 540       | 142             | 80+ | 3000    | 115            | 275x18x5.8 | -20~+50                | 50000           | CE<br>cUL, UL | SI-B8V114280WW |
|                | 1605               |                       |                   |         |           | 144             |     | 3500    |                |            |                        |                 |               | SI-B8U114280WW |
|                | 1650               |                       |                   |         |           | 148             |     | 4000    |                |            |                        |                 |               | SI-B8T114280WW |
|                | 1650               |                       |                   |         |           | 148             |     | 5000    |                |            |                        |                 |               | SI-B8R114280WW |

Indoor Linear Light



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-M562F | 1205               | 11.2                  | 24.8              | 450     | 540       | 108             | 90+ | 2700    | 115            | 560x18x5.8 | -20~+50                | 50000           | cUL, UL       | SI-B9W111560WW |
|          | 1225               |                       |                   |         |           | 110             |     | 3000    |                |            |                        |                 |               | SI-B9V111560WW |
|          | 1250               |                       |                   |         |           | 112             |     | 3500    |                |            |                        |                 |               | SI-B9U111560WW |
|          | 1300               |                       |                   |         |           | 116             |     | 4000    |                |            |                        |                 |               | SI-B9T111560WW |
| LT-M562G | 1605               | 14.9                  | 24.8              | 600     | 720       | 108             | 90+ | 2700    | 115            | 560x18x5.8 | -20~+50                | 50000           | cUL, UL       | SI-B9W151560WW |
|          | 1635               |                       |                   |         |           | 110             |     | 3000    |                |            |                        |                 |               | SI-B9V151560WW |
|          | 1670               |                       |                   |         |           | 112             |     | 3500    |                |            |                        |                 |               | SI-B9U151560WW |
|          | 1730               |                       |                   |         |           | 116             |     | 4000    |                |            |                        |                 |               | SI-B9T151560WW |
| LT-M562H | 1935               | 16.8                  | 24.0              | 700     | 1080      | 115             | 90+ | 2700    | 115            | 560x18x5.8 | -20~+50                | 50000           | cUL, UL       | SI-B9W171560WW |
|          | 1970               |                       |                   |         |           | 117             |     | 3000    |                |            |                        |                 |               | SI-B9V171560WW |
|          | 2010               |                       |                   |         |           | 120             |     | 3500    |                |            |                        |                 |               | SI-B9U171560WW |
|          | 2085               |                       |                   |         |           | 124             |     | 4000    |                |            |                        |                 |               | SI-B9T171560WW |



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-M272F | 600                | 5.6                   | 12.4              | 450     | 540       | 108             | 90+ | 2700    | 115            | 275x18x5.8 | -20~+50                | 50000           | cUL, UL       | SI-B9W051280WW |
|          | 615                |                       |                   |         |           | 110             |     | 3000    |                |            |                        |                 |               | SI-B9V051280WW |
|          | 625                |                       |                   |         |           | 112             |     | 3500    |                |            |                        |                 |               | SI-B9U051280WW |
|          | 650                |                       |                   |         |           | 116             |     | 4000    |                |            |                        |                 |               | SI-B9T051280WW |
| LT-M272G | 800                | 7.4                   | 24.8              | 300     | 360       | 108             | 90+ | 2700    | 115            | 275x18x5.8 | -20~+50                | 50000           | cUL, UL       | SI-B9W071280WW |
|          | 820                |                       |                   |         |           | 110             |     | 3000    |                |            |                        |                 |               | SI-B9V071280WW |
|          | 835                |                       |                   |         |           | 112             |     | 3500    |                |            |                        |                 |               | SI-B9U071280WW |
|          | 865                |                       |                   |         |           | 116             |     | 4000    |                |            |                        |                 |               | SI-B9T071280WW |
| LT-M272H | 1205               | 11.2                  | 24.8              | 450     | 540       | 108             | 90+ | 2700    | 115            | 275x18x5.8 | -20~+50                | 50000           | cUL, UL       | SI-B9W113280WW |
|          | 1225               |                       |                   |         |           | 110             |     | 3000    |                |            |                        |                 |               | SI-B9V113280WW |
|          | 1250               |                       |                   |         |           | 112             |     | 3500    |                |            |                        |                 |               | SI-B9U113280WW |
|          | 1300               |                       |                   |         |           | 116             |     | 4000    |                |            |                        |                 |               | SI-B9T113280WW |

S-series



LT-S562H



LT-S282H



LT-S142H

| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | I <sub>max</sub> (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)                        | Temperature Range (°C) | Life time (hrs) | Certification | Part Number                                                                                                                                                                                                  |
|----------|--------------------|-----------------------|-------------------|---------|-----------------------|-----------------|-----|---------|----------------|----------------------------------|------------------------|-----------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LT-S562H | 2155               | 13.2                  | 46.9              | 280     | 540                   | 163             | 80+ | 3000    | 115            | 559.7×23.8×5.2<br>559.7×23.8×7.4 | -20~+50                | 50000           | CE, ENEC      | SI-B8V13156SEU <br>SI-B8V13256SEU      |
|          | 2250               |                       |                   |         |                       | 170             |     | 4000    |                |                                  |                        |                 |               | SI-B8T13156SEU <br>SI-B8T13256SEU      |
|          | 2250               |                       |                   |         |                       | 170             |     | 6500    |                |                                  |                        |                 |               | SI-B8P13156SEU <br>SI-B8P13256SEU  |
| LT-S282H | 1070               | 6.6                   | 23.4              | 280     | 540                   | 163             | 80+ | 3000    | 115            | 279.7×23.8×5.2<br>279.7×23.8×7.4 | -20~+50                | 50000           | CE, ENEC      | SI-B8V07128VEU <br>SI-B8V07228VEU  |
|          | 1120               |                       |                   |         |                       | 170             |     | 4000    |                |                                  |                        |                 |               | SI-B8T07128VEU <br>SI-B8T07228VEU  |
|          | 1120               |                       |                   |         |                       | 170             |     | 6500    |                |                                  |                        |                 |               | SI-B8P07128VEU <br>SI-B8P07228VEU  |
| LT-S142H | 535                | 3.3                   | 11.7              | 280     | 540                   | 163             | 80+ | 3000    | 115            | 139.8×23.8×5.2<br>139.8×23.8×7.4 | -20~+50                | 50000           | CE, ENEC      | SI-B8V03114SEU <br>SI-B8V03214SEU  |
|          | 560                |                       |                   |         |                       | 170             |     | 4000    |                |                                  |                        |                 |               | SI-B8T03114SEU <br>SI-B8T03214SEU  |
|          | 560                |                       |                   |         |                       | 170             |     | 6500    |                |                                  |                        |                 |               | SI-B8P03114SEU <br>SI-B8P03214SEU  |
| LT-S562H | 1715               | 13.1                  | 46.9              | 280     | 540                   | 131             | 90+ | 3000    | 115            | 559.7×23.8×5.2<br>559.7×23.8×7.4 | -20~+50                | 50000           | CE, ENEC      | SI-B9V13156SEU <br>SI-B9V13256SEU  |
|          | 1810               |                       |                   |         |                       | 138             |     | 4000    |                |                                  |                        |                 |               | SI-B9T13156SEU <br>SI-B9T13256SEU  |
|          | 1875               |                       |                   |         |                       | 143             |     | 5000    |                |                                  |                        |                 |               | SI-B9R13156SEU <br>SI-B9R13256SEU  |
|          | 1875               |                       |                   |         |                       | 143             |     | 6500    |                |                                  |                        |                 |               | SI-B9P13156SEU <br>SI-B9P13256SEU  |
| LT-S282H | 860                | 6.6                   | 23.5              | 280     | 540                   | 131             | 90+ | 3000    | 115            | 279.7×23.8×5.2<br>279.7×23.8×7.4 | -20~+50                | 50000           | CE, ENEC      | SI-B9V07128VEU <br>SI-B9V07228VEU  |
|          | 905                |                       |                   |         |                       | 138             |     | 4000    |                |                                  |                        |                 |               | SI-B9T07128VEU <br>SI-B9T07228VEU  |
|          | 940                |                       |                   |         |                       | 143             |     | 5000    |                |                                  |                        |                 |               | SI-B9R07128VEU <br>SI-B9R07228VEU  |
|          | 940                |                       |                   |         |                       | 143             |     | 6500    |                |                                  |                        |                 |               | SI-B9P07128VEU <br>SI-B9P07228VEU  |
| LT-S142H | 430                | 3.3                   | 11.7              | 280     | 540                   | 131             | 90+ | 3000    | 115            | 139.8×23.8×5.2<br>139.8×23.8×7.4 | -20~+50                | 50000           | CE, ENEC      | SI-B9V03114SEU <br>SI-B9V03214SEU  |
|          | 455                |                       |                   |         |                       | 139             |     | 4000    |                |                                  |                        |                 |               | SI-B9T03114SEU <br>SI-B9T03214SEU  |
|          | 470                |                       |                   |         |                       | 143             |     | 5000    |                |                                  |                        |                 |               | SI-B9R03114SEU <br>SI-B9R03214SEU  |
|          | 470                |                       |                   |         |                       | 143             |     | 6500    |                |                                  |                        |                 |               | SI-B9P03114SEU <br>SI-B9P03214SEU  |

\* Front wiring connector, Rear wiring connector



LT-S562H\_V2



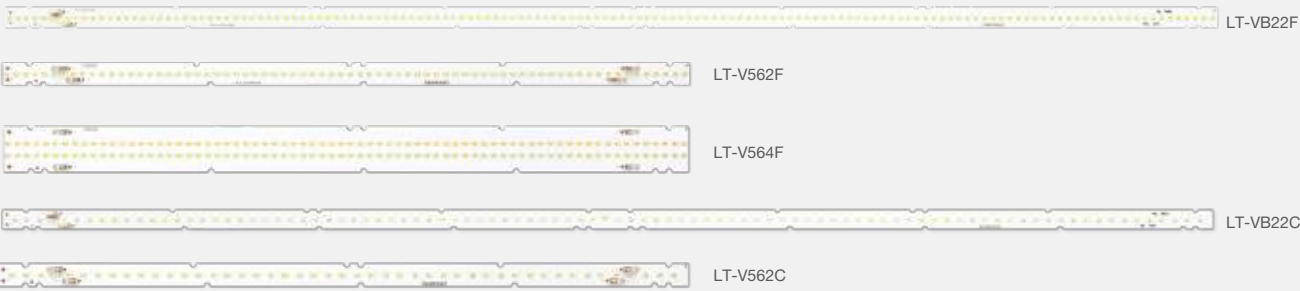
LT-S282H\_V2



LT-S142H\_V2

| Product     | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)       | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|-------------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-----------------|------------------------|-----------------|---------------|----------------|
| LT-S562H_V2 | 1070               | 6.6                   | 23.4              | 280     | 540       | 163             | 80+ | 3000    | 115            | 559.7×23.8×5.2  | -20~+50                | 50000           | CE, ENEC      | SI-B8V07156SEU |
|             | 1120               |                       |                   |         |           | 170             |     | 4000    |                |                 |                        |                 |               | SI-B8T07156SEU |
|             | 1120               |                       |                   |         |           | 170             |     | 6500    |                |                 |                        |                 |               | SI-B8P07156SEU |
| LT-S282H_V2 | 530                | 3.3                   | 11.7              | 280     | 540       | 161             | 80+ | 3000    | 115            | 279.7×23.8×5.2  | -20~+50                | 50000           | CE, ENEC      | SI-B8V03128SEU |
|             | 560                |                       |                   |         |           | 170             |     | 4000    |                |                 |                        |                 |               | SI-B8T03128SEU |
|             | 560                |                       |                   |         |           | 170             |     | 6500    |                |                 |                        |                 |               | SI-B8P03128SEU |
| LT-S142H_V2 | 270                | 1.6                   | 5.9               | 280     | 540       | 165             | 80+ | 3000    | 115            | 139.8×23.8×5.2  | -20~+50                | 50000           | CE, ENEC      | SI-B8V02114SEU |
|             | 280                |                       |                   |         |           | 171             |     | 4000    |                |                 |                        |                 |               | SI-B8T02114SEU |
|             | 280                |                       |                   |         |           | 171             |     | 6500    |                |                 |                        |                 |               | SI-B8P02114SEU |
| LT-S562H_V2 | 860                | 6.6                   | 23.4              | 280     | 540       | 131             | 90+ | 3000    | 115            | 559.7×23.8× 5.2 | -20~+50                | 50000           | CE, ENEC      | SI-B9V07156SEU |
|             | 905                |                       |                   |         |           | 138             |     | 4000    |                |                 |                        |                 |               | SI-B9T07156SEU |
|             | 940                |                       |                   |         |           | 143             |     | 5000    |                |                 |                        |                 |               | SI-B9R07156SEU |
|             | 940                |                       |                   |         |           | 143             |     | 6500    |                |                 |                        |                 |               | SI-B9P07156SEU |
| LT-S282H_V2 | 430                | 3.3                   | 11.7              | 280     | 540       | 131             | 90+ | 3000    | 115            | 279.7×23.8× 5.2 | -20~+50                | 50000           | CE, ENEC      | SI-B9V03128SEU |
|             | 455                |                       |                   |         |           | 139             |     | 4000    |                |                 |                        |                 |               | SI-B9T03128SEU |
|             | 470                |                       |                   |         |           | 143             |     | 5000    |                |                 |                        |                 |               | SI-B9R03128SEU |
|             | 470                |                       |                   |         |           | 143             |     | 6500    |                |                 |                        |                 |               | SI-B9P03128SEU |
| LT-S142H_V2 | 215                | 1.6                   | 5.9               | 280     | 540       | 131             | 90+ | 3000    | 115            | 139.8×23.8× 5.2 | -20~+50                | 50000           | CE, ENEC      | SI-B9V02114SEU |
|             | 230                |                       |                   |         |           | 139             |     | 4000    |                |                 |                        |                 |               | SI-B9T02114SEU |
|             | 235                |                       |                   |         |           | 143             |     | 5000    |                |                 |                        |                 |               | SI-B9R02114SEU |
|             | 235                |                       |                   |         |           | 143             |     | 6500    |                |                 |                        |                 |               | SI-B9P02114SEU |

V-series Gen 2



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | I <sub>max</sub> (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)    | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------------------|-----------------|-----|---------|----------------|--------------|------------------------|-----------------|---------------|----------------|
| LT-VB22F | 8300               | 52.1                  | 46.5              | 1120    | 1350                  | 159             | 80+ | 3000    | 115            | 1120x18x5.5  | -30~+50                | 50000           | cUL, UL       | SI-B8V522B2CUS |
|          | 8410               |                       |                   |         |                       | 161             |     |         |                |              |                        |                 |               | SI-B8U522B2CUS |
|          | 8690               |                       |                   |         |                       | 167             |     |         |                |              |                        |                 |               | SI-B8T522B2CUS |
|          | 8800               |                       |                   |         |                       | 169             |     |         |                |              |                        |                 |               | SI-B8R522B2CUS |
|          | 8800               |                       |                   |         |                       | 169             |     |         |                |              |                        |                 |               | SI-B8V26256CUS |
| LT-V562F | 4150               | 26.1                  | 23.3              | 1120    | 1350                  | 159             | 80+ | 3000    | 115            | 560x18x5.5   | -30~+50                | 50000           | cUL, UL       | SI-B8U26256CUS |
|          | 4205               |                       |                   |         |                       | 161             |     |         |                |              |                        |                 |               | SI-B8T26256CUS |
|          | 4345               |                       |                   |         |                       | 167             |     |         |                |              |                        |                 |               | SI-B8R26256CUS |
|          | 4400               |                       |                   |         |                       | 169             |     |         |                |              |                        |                 |               | SI-B8V2256CUS  |
| LT-V564F | 8300               | 52.1                  | 46.5              | 1120    | 1350                  | 159             | 80+ | 3000    | 115            | 560x39.8x5.5 | -30~+50                | 50000           | cUL, UL       | SI-B8U52256CUS |
|          | 8410               |                       |                   |         |                       | 161             |     |         |                |              |                        |                 |               | SI-B8T52256CUS |
|          | 8690               |                       |                   |         |                       | 167             |     |         |                |              |                        |                 |               | SI-B8R52256CUS |
|          | 8800               |                       |                   |         |                       | 169             |     |         |                |              |                        |                 |               | SI-B8V342B2CUS |
| LT-VB22C | 5360               | 32.5                  | 46.4              | 700     | 900                   | 165             | 80+ | 3000    | 115            | 1120x18x5.5  | -30~+50                | 50000           | cUL, UL       | SI-B8U342B2CUS |
|          | 5440               |                       |                   |         |                       | 167             |     |         |                |              |                        |                 |               | SI-B8T342B2CUS |
|          | 5620               |                       |                   |         |                       | 173             |     |         |                |              |                        |                 |               | SI-B8R342B2CUS |
|          | 5690               |                       |                   |         |                       | 175             |     |         |                |              |                        |                 |               | SI-B8V17256CWW |
| LT-V562C | 2680               | 16.2                  | 23.2              | 700     | 900                   | 165             | 80+ | 3000    | 115            | 560x18x5.5   | -30~+50                | 50000           | cUL, UL       | SI-B8U17256CWW |
|          | 2720               |                       |                   |         |                       | 167             |     |         |                |              |                        |                 |               | SI-B8T17256CWW |
|          | 2810               |                       |                   |         |                       | 173             |     |         |                |              |                        |                 |               | SI-B8R17256CWW |
|          | 2845               |                       |                   |         |                       | 175             |     |         |                |              |                        |                 |               | SI-B8V17256CWW |

V-series



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | I <sub>max</sub> (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)   | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------------------|-----------------|-----|---------|----------------|-------------|------------------------|-----------------|---------------|----------------|
| LT-VB22A | 2696               | 21.2                  | 25.2              | 840     | 1080                  | 127             | 80+ | 3000    | 115            | 1120x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8V221B2CUS |
|          | 2800               |                       |                   |         |                       | 132             |     |         |                |             |                        |                 |               | SI-B8U221B2CUS |
|          | 2904               |                       |                   |         |                       | 137             |     |         |                |             |                        |                 |               | SI-B8T221B2CUS |
|          | 2904               |                       |                   |         |                       | 137             |     |         |                |             |                        |                 |               | SI-B8R221B2CUS |
|          | 2904               |                       |                   |         |                       | 137             |     |         |                |             |                        |                 |               | SI-B8V301B2CUS |
| LT-VB22B | 4090               | 32.0                  | 25.4              | 1260    | 1440                  | 128             | 80+ | 3000    | 115            | 1120x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8U301B2CUS |
|          | 4218               |                       |                   |         |                       | 132             |     |         |                |             |                        |                 |               | SI-B8T301B2CUS |
|          | 4314               |                       |                   |         |                       | 135             |     |         |                |             |                        |                 |               | SI-B8R301B2CUS |
|          | 4314               |                       |                   |         |                       | 135             |     |         |                |             |                        |                 |               | SI-B8V341B2CUS |
| LT-VB22C | 4540               | 33.6                  | 48.0              | 700     | 1080                  | 135             | 80+ | 3000    | 115            | 1120x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8U341B2CUS |
|          | 4738               |                       |                   |         |                       | 141             |     |         |                |             |                        |                 |               | SI-B8T341B2CUS |
|          | 4920               |                       |                   |         |                       | 146             |     |         |                |             |                        |                 |               | SI-B8R341B2CUS |
|          | 4920               |                       |                   |         |                       | 146             |     |         |                |             |                        |                 |               | SI-B8V341B2CUS |



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-V562A | 1348               | 10.6                  | 25.2              | 420     | 540       | 127             | 80+ | 3000    | 115            | 560x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8V11156CWW |
|          | 1400               |                       |                   |         |           | 132             |     | 3500    |                |            |                        |                 |               | SI-B8U11156CWW |
|          | 1452               |                       |                   |         |           | 137             |     | 4000    |                |            |                        |                 |               | SI-B8T11156CWW |
|          | 1452               |                       |                   |         |           | 137             |     | 5000    |                |            |                        |                 |               | SI-B8R11156CWW |
|          | 2045               |                       |                   |         |           | 128             |     | 3000    |                |            |                        |                 |               | SI-B8V15156CWW |
| LT-V562B | 2109               | 16.0                  | 25.4              | 630     | 720       | 132             | 80+ | 3500    | 115            | 560x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8U15156CWW |
|          | 2157               |                       |                   |         |           | 135             |     | 4000    |                |            |                        |                 |               | SI-B8T15156CWW |
|          | 2157               |                       |                   |         |           | 135             |     | 5000    |                |            |                        |                 |               | SI-B8R15156CWW |
|          | 2270               |                       |                   |         |           | 135             |     | 3000    |                |            |                        |                 |               | SI-B8V17156CWW |
| LT-V562C | 2369               | 16.8                  | 24.0              | 700     | 1080      | 141             | 80+ | 3500    | 115            | 560x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8U17156CWW |
|          | 2460               |                       |                   |         |           | 146             |     | 4000    |                |            |                        |                 |               | SI-B8T17156CWW |
|          | 2460               |                       |                   |         |           | 146             |     | 5000    |                |            |                        |                 |               | SI-B8R17156CWW |
|          | 2460               |                       |                   |         |           | 146             |     | 5000    |                |            |                        |                 |               | SI-B8R17156CWW |



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-V282A | 724                | 5.7                   | 12.6              | 450     | 540       | 128             | 80+ | 3000    | 115            | 275x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8V06128CWW |
|          | 746                |                       |                   |         |           | 132             |     | 3500    |                |            |                        |                 |               | SI-B8U06128CWW |
|          | 769                |                       |                   |         |           | 136             |     | 4000    |                |            |                        |                 |               | SI-B8T06128CWW |
|          | 769                |                       |                   |         |           | 136             |     | 5000    |                |            |                        |                 |               | SI-B8R06128CWW |
|          | 965                |                       |                   |         |           | 128             |     | 3000    |                |            |                        |                 |               | SI-B8V08128CWW |
| LT-V282B | 995                | 7.6                   | 25.2              | 300     | 360       | 132             | 80+ | 3500    | 115            | 275x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8U08128CWW |
|          | 1026               |                       |                   |         |           | 136             |     | 4000    |                |            |                        |                 |               | SI-B8T08128CWW |
|          | 1026               |                       |                   |         |           | 136             |     | 5000    |                |            |                        |                 |               | SI-B8R08128CWW |
|          | 1026               |                       |                   |         |           | 136             |     | 5000    |                |            |                        |                 |               | SI-B8R08128CWW |

T-series



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA)   | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|-----------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| LT-T562C | 1900               | 13.5                  | 18.0 / 0          | 750 / 0   | -         | 141             | 80+ | 2700    | 115            | 560x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8A131560WW |
|          | 2075               | 12.6                  | 16.7 / 16.7       | 375 / 375 |           | 165             |     | 4000    |                |            |                        |                 |               |                |
|          | 2060               | 13.5                  | 0 / 18.0          | 0 / 750   |           | 153             |     | 6500    |                |            |                        |                 |               |                |
|          | 2060               | 13.5                  | 0 / 18.0          | 0 / 750   |           | 153             |     | 6500    |                |            |                        |                 |               |                |
| LT-T282C | 950                | 6.8                   | 9.0 / 0           | 750 / 0   | -         | 141             | 80+ | 2700    | 115            | 275x18x5.5 | -20~+50                | 50000           | cUL, UL       | SI-B8A071280WW |
|          | 1040               | 6.3                   | 8.4 / 8.4         | 375 / 375 |           | 165             |     | 4000    |                |            |                        |                 |               |                |
|          | 1030               | 6.8                   | 0 / 9.0           | 0 / 750   |           | 153             |     | 6500    |                |            |                        |                 |               |                |
|          | 1030               | 6.8                   | 0 / 9.0           | 0 / 750   |           | 153             |     | 6500    |                |            |                        |                 |               |                |

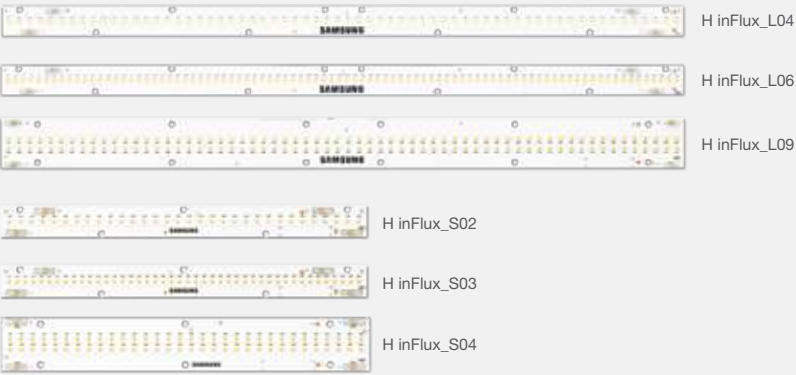


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- Reduced thermal resistance using Samsung's high performing mid-power LEDs
- Better uniformity & cost effective

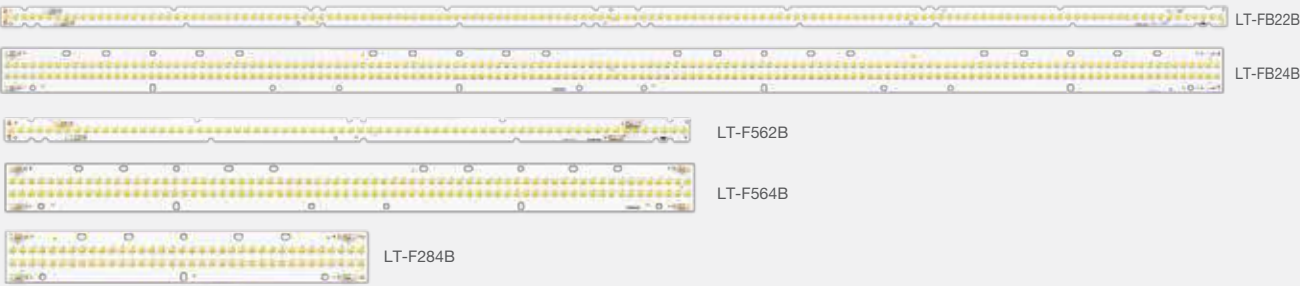
| Product                                                                                             | Key Features                                                                                                                                                                                                             | Efficacy (lm/W) | Lifespan |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
|  H inFlux        | <ul style="list-style-type: none"><li>• Wide lumen flux coverage - up to 40,000lm by combining modules</li><li>• Highest performance</li><li>• 192lm/W [4000K, CRI 80+, Tp 55°C]</li></ul>                               | ●●●●●           | ●●●●●    |
|  F-series        | <ul style="list-style-type: none"><li>• High lumen density of 18,600lm to replace tubes in high/low bay lighting</li><li>• Platform &amp; flexible design choices</li><li>• High efficacy up to 175lm/W @4000K</li></ul> | ●●●●○           | ●●●●○    |
|  V-series F-type | <ul style="list-style-type: none"><li>• Value solution</li><li>• 146lm/W [4000K, CRI80+, Tp 50°C]</li></ul>                                                                                                              | ●●○○○           | ●●●○○    |
|  R-series        | <ul style="list-style-type: none"><li>• High lm/W for high ceiling/height applications</li><li>• High efficacy up to 169lm/W @4000K</li></ul>                                                                            | ●●●●○           | ●●●●○    |
|  Round Highbay   | <ul style="list-style-type: none"><li>• Wide lumen choice available in the same fixture</li><li>• Good thermal management by flip-chip technology</li></ul>                                                              | ●●●○○           | ●●●●●    |

H inFlux



| Product      | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)  | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|--------------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|------------|------------------------|-----------------|---------------|----------------|
| H inFlux_L04 | 3960               | 22.3                  | 22.3              | 1000    | 1380      | 178             | 80+ | 3000    | 120            | 560x24x5.9 | -40~+50                | 50000           | CE, cUL, UL   | SL-B8V2N80LAWW |
|              | 4060               |                       |                   |         |           | 182             |     |         |                |            |                        |                 |               | SL-B8U2N80LAWW |
|              | 4280               |                       |                   |         |           | 192             |     |         |                |            |                        |                 |               | SL-B8T2N80LAWW |
|              | 4280               |                       |                   |         |           | 192             |     |         |                |            |                        |                 |               | SL-B8R2N80LAWW |
| H inFlux_L06 | 5630               | 32.0                  | 22.4              | 1430    | 950       | 176             | 80+ | 3000    | 120            | 560x24x5.9 | -40~+50                | 50000           | CE, cUL, UL   | SL-B8V3N80LAWW |
|              | 5800               |                       |                   |         |           | 181             |     |         |                |            |                        |                 |               | SL-B8U3N80LAWW |
|              | 6110               |                       |                   |         |           | 191             |     |         |                |            |                        |                 |               | SL-B8T3N80LAWW |
|              | 6110               |                       |                   |         |           | 191             |     |         |                |            |                        |                 |               | SL-B8R3N80LAWW |
| H inFlux_L09 | 7910               | 44.6                  | 44.6              | 1000    | 1380      | 177             | 80+ | 3000    | 120            | 561x41x5.9 | -40~+50                | 50000           | CE, cUL, UL   | SL-B8V4N90LAWW |
|              | 8130               |                       |                   |         |           | 182             |     |         |                |            |                        |                 |               | SL-B8U4N90LAWW |
|              | 8570               |                       |                   |         |           | 192             |     |         |                |            |                        |                 |               | SL-B8T4N90LAWW |
|              | 8570               |                       |                   |         |           | 192             |     |         |                |            |                        |                 |               | SL-B8R4N90LAWW |
| H inFlux_S02 | 1980               | 11.1                  | 11.1              | 1000    | 1380      | 178             | 80+ | 3000    | 120            | 280x24x5.9 | -40~+50                | 50000           | CE, cUL, UL   | SL-B8V1N30LAWW |
|              | 2030               |                       |                   |         |           | 183             |     |         |                |            |                        |                 |               | SL-B8U1N30LAWW |
|              | 2140               |                       |                   |         |           | 193             |     |         |                |            |                        |                 |               | SL-B8T1N30LAWW |
|              | 2140               |                       |                   |         |           | 193             |     |         |                |            |                        |                 |               | SL-B8R1N30LAWW |
| H inFlux_S03 | 2820               | 16.0                  | 11.2              | 1430    | 950       | 176             | 80+ | 3000    | 120            | 280x24x5.9 | -40~+50                | 50000           | CE, cUL, UL   | SL-B8V1N60LAWW |
|              | 2890               |                       |                   |         |           | 180             |     |         |                |            |                        |                 |               | SL-B8U1N60LAWW |
|              | 3060               |                       |                   |         |           | 191             |     |         |                |            |                        |                 |               | SL-B8T1N60LAWW |
|              | 3060               |                       |                   |         |           | 191             |     |         |                |            |                        |                 |               | SL-B8R1N60LAWW |
| H inFlux_S04 | 3960               | 22.3                  | 22.3              | 1000    | 1380      | 178             | 80+ | 3000    | 120            | 281x41x5.9 | -40~+50                | 50000           | CE, cUL, UL   | SL-B8V2N70LAWW |
|              | 4060               |                       |                   |         |           | 182             |     |         |                |            |                        |                 |               | SL-B8U2N70LAWW |
|              | 4280               |                       |                   |         |           | 192             |     |         |                |            |                        |                 |               | SL-B8T2N70LAWW |
|              | 4280               |                       |                   |         |           | 192             |     |         |                |            |                        |                 |               | SL-B8R2N70LAWW |

F-series



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)      | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|----------------|------------------------|-----------------|---------------|----------------|
| LT-FB22B | 8670               | 51.5                  | 46.0              | 1120    | 1800      | 168             | 80+ | 3000    | 115            | 1120x18x5.2    | -30~+55                | 50000           | cUL, UL       | SI-B8V521B20WW |
|          | 8800               |                       |                   |         |           | 171             |     | 3500    |                |                |                        |                 |               | SI-B8U521B20WW |
|          | 9000               |                       |                   |         |           | 175             |     | 4000    |                |                |                        |                 |               | SI-B8T521B20WW |
|          | 9300               |                       |                   |         |           | 181             |     | 5000    |                |                |                        |                 |               | SI-B8R521B20WW |
| LT-FB24B | 17340              | 103.0                 | 46.0              | 2240    | 3600      | 168             | 80+ | 3000    | 115            | 1120x39.8x5.2  | -30~+55                | 50000           | cUL, UL       | SI-B8VZ91B20WW |
|          | 17600              |                       |                   |         |           | 171             |     | 3500    |                |                |                        |                 |               | SI-B8UZ91B20WW |
|          | 18000              |                       |                   |         |           | 175             |     | 4000    |                |                |                        |                 |               | SI-B8TZ91B20WW |
|          | 18600              |                       |                   |         |           | 181             |     | 5000    |                |                |                        |                 |               | SI-B8RZ91B20WW |
| LT-F562B | 4335               | 25.8                  | 23.0              | 1120    | 1800      | 168             | 80+ | 3000    | 115            | 560x18x5.2     | -30~+55                | 50000           | cUL, UL       | SI-B8V261560WW |
|          | 4400               |                       |                   |         |           | 171             |     | 3500    |                |                |                        |                 |               | SI-B8U261560WW |
|          | 4500               |                       |                   |         |           | 175             |     | 4000    |                |                |                        |                 |               | SI-B8T261560WW |
|          | 4650               |                       |                   |         |           | 181             |     | 5000    |                |                |                        |                 |               | SI-B8R261560WW |
| LT-F564B | 8670               | 51.5                  | 46.0              | 1120    | 1800      | 168             | 80+ | 3000    | 115            | 559.7x39.8x5.2 | -30~+55                | 50000           | cUL, UL       | SI-B8V521560WW |
|          | 8800               |                       |                   |         |           | 171             |     | 3500    |                |                |                        |                 |               | SI-B8U521560WW |
|          | 9000               |                       |                   |         |           | 175             |     | 4000    |                |                |                        |                 |               | SI-B8T521560WW |
|          | 9300               |                       |                   |         |           | 181             |     | 5000    |                |                |                        |                 |               | SI-B8R521560WW |
| LT-F284B | 4335               | 25.8                  | 23.0              | 1120    | 1800      | 168             | 80+ | 3000    | 115            | 280x40x5.2     | -30~+55                | 50000           | cUL, UL       | SI-B8V261280WW |
|          | 4400               |                       |                   |         |           | 171             |     | 3500    |                |                |                        |                 |               | SI-B8U261280WW |
|          | 4500               |                       |                   |         |           | 175             |     | 4000    |                |                |                        |                 |               | SI-B8T261280WW |
|          | 4650               |                       |                   |         |           | 181             |     | 5000    |                |                |                        |                 |               | SI-B8R261280WW |

V-series F-type



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)     | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|---------------|------------------------|-----------------|---------------|----------------|
| LT-VB22F | 7214               | 54.7                  | 48.8              | 1120    | 1620      | 132             | 80+ | 3000    | 115            | 1120x18x5.5   | -30~+50                | 50000           | cUL, UL       | SI-B8V521B2CUS |
|          | 7488               |                       |                   |         |           | 137             |     | 3500    |                |               |                        |                 |               | SI-B8U521B2CUS |
|          | 7816               |                       |                   |         |           | 143             |     | 4000    |                |               |                        |                 |               | SI-B8T521B2CUS |
|          | 7816               |                       |                   |         |           | 143             |     | 5000    |                |               |                        |                 |               | SI-B8R521B2CUS |
| LT-VB24F | 14428              | 109.3                 | 48.8              | 2240    | 3240      | 132             | 80+ | 3000    | 115            | 1120x39.8x5.5 | -30~+50                | 50000           | cUL, UL       | SI-B8VZ91B2CUS |
|          | 14976              |                       |                   |         |           | 137             |     | 3500    |                |               |                        |                 |               | SI-B8UZ91B2CUS |
|          | 15632              |                       |                   |         |           | 143             |     | 4000    |                |               |                        |                 |               | SI-B8TZ91B2CUS |
|          | 15632              |                       |                   |         |           | 143             |     | 5000    |                |               |                        |                 |               | SI-B8RZ91B2CUS |
| LT-V562F | 3607               | 27.3                  | 24.4              | 1120    | 1620      | 132             | 80+ | 3000    | 115            | 560x18x5.5    | -30~+50                | 50000           | cUL, UL       | SI-B8V26156CUS |
|          | 3744               |                       |                   |         |           | 137             |     | 3500    |                |               |                        |                 |               | SI-B8U26156CUS |
|          | 3908               |                       |                   |         |           | 143             |     | 4000    |                |               |                        |                 |               | SI-B8T26156CUS |
|          | 3908               |                       |                   |         |           | 143             |     | 5000    |                |               |                        |                 |               | SI-B8R26156CUS |
| LT-V564F | 7214               | 54.7                  | 48.8              | 1120    | 1620      | 132             | 80+ | 3000    | 115            | 560x39.8x5.5  | -30~+50                | 50000           | cUL, UL       | SI-B8V52156CUS |
|          | 7488               |                       |                   |         |           | 137             |     | 3500    |                |               |                        |                 |               | SI-B8U52156CUS |
|          | 7816               |                       |                   |         |           | 143             |     | 4000    |                |               |                        |                 |               | SI-B8T52156CUS |
|          | 7816               |                       |                   |         |           | 143             |     | 5000    |                |               |                        |                 |               | SI-B8R52156CUS |

R-series



| Product  | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)                | Temperature Range (°C) | Life time (hrs) | Certification     | Part Number    |
|----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|--------------------------|------------------------|-----------------|-------------------|----------------|
| LT-R286A | 1520               | 9.4                   | 32.3              | 290     | 540       | 162             | 80+ | 3000    | 115            | 280×55×5.8<br>280×55×7.4 | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-B8V09A280WW |
|          | 1590               |                       |                   |         |           | 169             |     | 4000    |                |                          |                        |                 |                   | SI-B8T09A280WW |
|          | 1635               |                       |                   |         |           | 174             |     | 5000    |                |                          |                        |                 |                   | SI-B8R09A280WW |
|          | 1590               |                       |                   |         |           | 169             |     | 6500    |                |                          |                        |                 |                   | SI-B8P09A280WW |
| LT-R286C | 2810               | 20.7                  | 32                | 648     | 1050      | 136             | 80+ | 3000    | 115            | 280×55×5.8<br>280×55×7.4 | -20~+50                | 50000           | CE                | SI-B8V211280WW |
|          | 3000               |                       |                   |         |           | 145             |     | 4000    |                |                          |                        |                 |                   | SI-B8T211280WW |
|          | 3000               |                       |                   |         |           | 145             |     | 5000    |                |                          |                        |                 |                   | SI-B8R211280WW |
|          | 3000               |                       |                   |         |           | 145             |     | 5000    |                |                          |                        |                 |                   | SI-B8P211280WW |

\* Front wiring connector, Rear wiring connector

Round Highbay



| Product | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm) | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|---------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-----------|------------------------|-----------------|---------------|----------------|
| 10000lm | 10300              | 74                    | 40.1              | 2100    | 2500      | 140             | 80+ | 4000    | 115            | Φ76x5.75  | 10~+50                 | 50000           | TBD           | SL-B8T8NA0L1WW |
|         | 10400              |                       |                   |         |           | 142             |     | 5000    |                |           |                        |                 |               | SL-B8R8NA0L1WW |
| 20000lm | 20700              | 148                   | 80.3              | 2100    | 2500      | 140             | 80+ | 4000    | 115            | Φ76x5.75  | 10~+50                 | 50000           | TBD           | SL-B8TANB0L1WW |
|         | 20900              |                       |                   |         |           | 142             |     | 5000    |                |           |                        |                 |               | SL-B8RANB0L1WW |
| 30000lm | 31000              | 222                   | 120.4             | 2100    | 2500      | 140             | 80+ | 4000    | 115            | Φ76x5.75  | 10~+50                 | 50000           | TBD           | SL-B8TBNC0L1WW |
|         | 31499              |                       |                   |         |           | 142             |     | 5000    |                |           |                        |                 |               | SL-B8RBNC0L1WW |



LAM Type



| Product   | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)   | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|-----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-------------|------------------------|-----------------|---------------|----------------|
| LAM-SQ30C | 1445               | 10.6                  | 30.2              | 350     | 540       | 137             | 80+ | 3000    | 145            | 259x250x6.6 | -20~+50                | 50000           | CE, ENEC      | SI-B8V114250WW |
|           | 1515               |                       |                   |         |           | 143             |     | 4000    |                |             |                        |                 |               | SI-B8T114250WW |
|           | 1515               |                       |                   |         |           | 143             |     | 6500    |                |             |                        |                 |               | SI-B8P114250WW |
| LAM-RT30C | 1445               | 10.6                  | 30.2              | 350     | 540       | 137             | 80+ | 3000    | 145            | 216x273x6.6 | -20~+50                | 50000           | CE, ENEC      | SI-B8V116280WW |
|           | 1515               |                       |                   |         |           | 143             |     | 4000    |                |             |                        |                 |               | SI-B8T116280WW |
|           | 1515               |                       |                   |         |           | 143             |     | 6500    |                |             |                        |                 |               | SI-B8P116280WW |
| LAM-SQ32B | 1280               | 9.0                   | 23.5              | 385     | 600       | 141             | 80+ | 3000    | 145            | 259x250x6.6 | -20~+50                | 50000           | UL            | SI-B8V09526001 |
|           | 1300               |                       |                   |         |           | 144             |     | 3500    |                |             |                        |                 |               | SI-B8U09526001 |
|           | 1340               |                       |                   |         |           | 148             |     | 4000    |                |             |                        |                 |               | SI-B8T09526001 |
|           | 1380               |                       |                   |         |           | 153             |     | 5000    |                |             |                        |                 |               | SI-B8R09526001 |

Finger Type



| Product      | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Beam Angle (°) | Size (mm)   | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|--------------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|----------------|-------------|------------------------|-----------------|---------------|----------------|
| Finger-128D  | 2450               | 12.4                  | 21.7              | 570     | 2880      | 198             | 80+ | 3000    | 115            | 250x523x5.8 | -20~+50                | 50000           | CE, ENEC      | SI-B8V121530WW |
|              | 2600               |                       |                   |         |           | 210             |     | 4000    |                |             |                        |                 |               | SI-B8T121530WW |
|              | 1385               |                       |                   |         |           | 178             |     | 3000    |                |             |                        |                 |               | SI-B8V102250WW |
| Finger-SQ64C | 1405               | 7.8                   | 11.2              | 700     | 2400      | 180             | 80+ | 3500    | 115            | 259x250x5.8 | -20~+50                | 50000           | CE, ENEC      | SI-B8U102250WW |
|              | 1450               |                       |                   |         |           | 186             |     | 4000    |                |             |                        |                 |               | SI-B8T102250WW |
|              | 1495               |                       |                   |         |           | 192             |     | 5000    |                |             |                        |                 |               | SI-B8R102250WW |
|              | 1450               |                       |                   |         |           | 186             |     | 6500    |                |             |                        |                 |               | SI-B8P102250WW |
| Finger-RT64C | 1385               | 7.8                   | 11.2              | 700     | 2400      | 178             | 80+ | 3000    | 115            | 230x273x5.8 | -20~+50                | 50000           | CE, ENEC      | SI-B8V104280WW |
|              | 1405               |                       |                   |         |           | 180             |     | 3500    |                |             |                        |                 |               | SI-B8U104280WW |
|              | 1450               |                       |                   |         |           | 186             |     | 4000    |                |             |                        |                 |               | SI-B8T104280WW |
|              | 1495               |                       |                   |         |           | 192             |     | 5000    |                |             |                        |                 |               | SI-B8R104280WW |
| Finger-SQ30C | 1450               | 10.6                  | 30.2              | 350     | 540       | 186             | 80+ | 6500    | 115            | 259x250x5.8 | -20~+50                | 50000           | CE, ENEC      | SI-B8P104280WW |
|              | 1535               |                       |                   |         |           | 145             |     | 3000    |                |             |                        |                 |               | SI-B8V113250WW |
|              | 1610               |                       |                   |         |           | 152             |     | 4000    |                |             |                        |                 |               | SI-B8T113250WW |
|              | 1610               |                       |                   |         |           | 152             |     | 6500    |                |             |                        |                 |               | SI-B8P113250WW |
| Finger-RT30C | 1535               | 10.6                  | 30.2              | 350     | 540       | 145             | 80+ | 3000    | 115            | 216x273x5.8 | -20~+50                | 50000           | CE, ENEC      | SI-B8V115280WW |
|              | 1610               |                       |                   |         |           | 152             |     | 4000    |                |             |                        |                 |               | SI-B8T115280WW |
|              | 1610               |                       |                   |         |           | 152             |     | 6500    |                |             |                        |                 |               | SI-B8P115280WW |
|              | 1370               |                       |                   |         |           | 151             |     | 3500    |                |             |                        |                 |               | SI-B8U09626001 |
| Finger-SQ32B | 1410               | 9.0                   | 23.5              | 385     | 600       | 156             | 80+ | 4000    | 115            | 259x250x5.8 | -20~+50                | 50000           | UL            | SI-B8T09626001 |
|              | 1450               |                       |                   |         |           | 160             |     | 5000    |                |             |                        |                 |               | SI-B8R09626001 |

High efficacy Area Platform Modules that are cost-effective and deliver uniform light output

- Available to design slimmer luminaire integrating optical technology (LAM Type)
- Value added optical technology designed by Samsung (LAM Type)
- Optimized number of packages for superior light uniformity

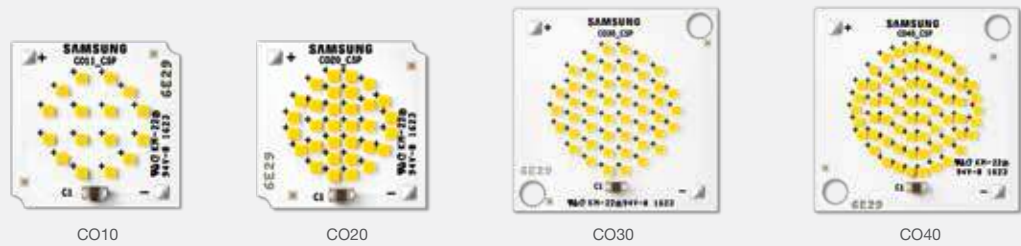
| Product                                                                             | Key Features | Efficacy (lm/W)                                                                                                                               | Lifespan |
|-------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------|
|  | LAM type     | <ul style="list-style-type: none"><li>• Best solution for slim luminaire design</li><li>• Good uniformity even curved optic design</li></ul>  | ●●●●●    |
|  | Finger type  | <ul style="list-style-type: none"><li>• Better uniformity solution for flat panel type</li><li>• High efficacy up to 186lm/W @4000K</li></ul> | ●●●●●    |

Down & Spot Light



Down & Spot Light

CSP Spot



| Product | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | Tp (°C) | CRI | CCT (K) | Beam Angle (°) | Size (mm) | Temperature Range (°C) | Life time (hrs) | Certification     | Part Number    |
|---------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|---------|-----|---------|----------------|-----------|------------------------|-----------------|-------------------|----------------|
| CO10    | 1010               | 9.4                   | 23.5              | 400     | 700       | 107             | 65      | 80+ | 2700    | 150            | 19x19x2.2 | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8W0916E0WW |
|         | 1050               |                       |                   |         |           | 112             |         |     | 3000    |                |           |                        |                 |                   | SI-N8V0916E0WW |
|         | 1070               |                       |                   |         |           | 114             |         |     | 3500    |                |           |                        |                 |                   | SI-N8U0916E0WW |
|         | 1140               |                       |                   |         |           | 121             |         |     | 4000    |                |           |                        |                 |                   | SI-N8T0916E0WW |
| CO20    | 1980               | 18.3                  | 23.4              | 780     | 1400      | 108             | 65      | 80+ | 2700    | 140            | 19x19x2.2 | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8W1816E0WW |
|         | 2060               |                       |                   |         |           | 113             |         |     | 3000    |                |           |                        |                 |                   | SI-N8V1816E0WW |
|         | 2110               |                       |                   |         |           | 116             |         |     | 3500    |                |           |                        |                 |                   | SI-N8U1816E0WW |
|         | 2240               |                       |                   |         |           | 123             |         |     | 4000    |                |           |                        |                 |                   | SI-N8T1816E0WW |
| CO30    | 2980               | 27.4                  | 23.4              | 1170    | 2100      | 109             | 65      | 80+ | 2700    | 145            | 28x28x2.2 | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8W2716E0WW |
|         | 3090               |                       |                   |         |           | 113             |         |     | 3000    |                |           |                        |                 |                   | SI-N8V2716E0WW |
|         | 3160               |                       |                   |         |           | 115             |         |     | 3500    |                |           |                        |                 |                   | SI-N8U2716E0WW |
|         | 3360               |                       |                   |         |           | 123             |         |     | 4000    |                |           |                        |                 |                   | SI-N8T2716E0WW |
| CO40    | 3970               | 36.5                  | 23.4              | 1560    | 2800      | 109             | 65      | 80+ | 2700    | 140            | 28x28x2.2 | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8W3616E0WW |
|         | 4120               |                       |                   |         |           | 113             |         |     | 3000    |                |           |                        |                 |                   | SI-N8V3616E0WW |
|         | 4220               |                       |                   |         |           | 115             |         |     | 3500    |                |           |                        |                 |                   | SI-N8U3616E0WW |
|         | 4490               |                       |                   |         |           | 123             |         |     | 4000    |                |           |                        |                 |                   | SI-N8T3616E0WW |

CSP Spot Tunable



| Product | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | Tp (°C) | CRI | CCT (K) | Beam Angle (°) | Size (mm) | Temperature Range (°C) | Life time (hrs) | Certification     | Part Number    |
|---------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|---------|-----|---------|----------------|-----------|------------------------|-----------------|-------------------|----------------|
| TO10    | 990                | 8.5                   | 33.9              | 250     | 350       | 117             | 65      | 80+ | 2700    | 150            | 28x28x2.2 | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8A1016E0WW |
|         | 1020               | 9.0                   | 35.9              |         |           | 114             |         |     | 6500    | 145            |           |                        |                 |                   | SI-N8B1016E0WW |
|         | 990                | 8.5                   | 33.9              |         |           | 117             |         |     | 2700    | 150            |           |                        |                 |                   | SI-N8B1016E0WW |
|         | 1080               | 9.0                   | 35.9              |         |           | 120             |         |     | 5000    | 145            |           |                        |                 |                   | SI-N8B1016E0WW |
| TO20    | 1940               | 17.4                  | 34.7              | 500     | 700       | 112             | 65      | 80+ | 2700    | 140            | 28x28x2.2 | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8A1816E0WW |
|         | 2040               | 18.0                  | 35.9              |         |           | 114             |         |     | 6500    | 140            |           |                        |                 |                   | SI-N8B1816E0WW |
|         | 1940               | 17.4                  | 34.7              |         |           | 112             |         |     | 2700    | 140            |           |                        |                 |                   | SI-N8B1816E0WW |
|         | 2160               | 18.0                  | 35.9              |         |           | 120             |         |     | 5000    | 140            |           |                        |                 |                   | SI-N8B1816E0WW |

High efficacy modules that are ideal for use in downlights and spotlights

- High efficacy downlight modules with latest LED technology from Samsung
- Suitable for various applications including general flood light, spotlight and ceiling light
- Best color consistency derived from Samsung's extensive binning expertise

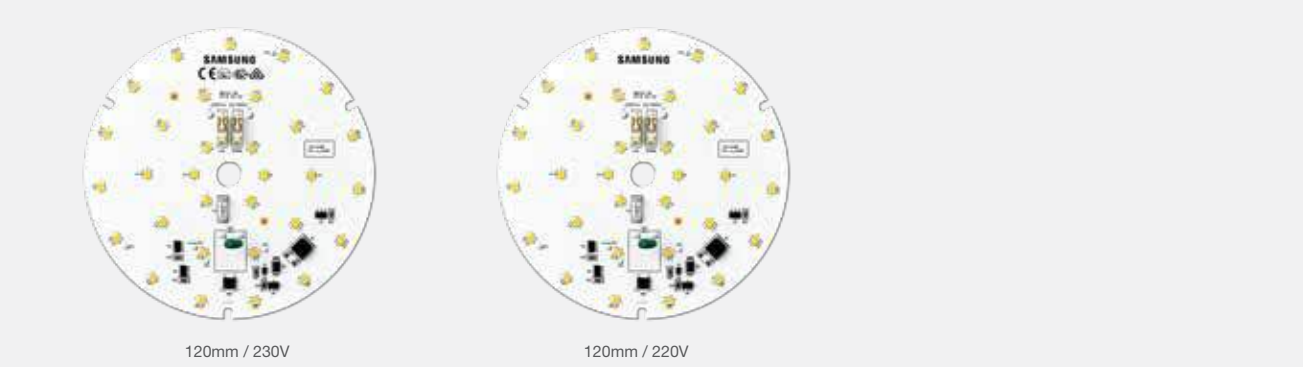
| Product                                                                                                | Key Features                                                                                                                                     | Efficacy (lm/W) | Lifespan |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
|  CSP Spot           | • Designed following Zhaga specification, excellent compatibility of eco-partner's component<br>• Possible to design various sizes of downlights | ●●●○○           | ●●●●○    |
|  CSP Spot Tunable   | • 1000/2000lm color tunable solutions with a small LES                                                                                           | ●●●○○           | ●●●●○    |
|  Round Module Gen 3 | • High efficacy down-light modules with latest LED technology<br>• Possible to design 4~8inch downlight                                          | ●●●●●           | ●●●●○    |
|  ACOM Round 120mm   | • Easy installation (No external driver required)<br>• Cost competitive with good lm/\$                                                          | ●●●●○           | ●●●○○    |
|  ACOM Round 100mm   | • Flicker-free(%Flicker < 30%), Dimming to 10% brightness with good dimmer compatibility<br>• Designed following CEC Title-24 standard           | ●●●○○           | ●●●○○    |

Round Module Gen 3



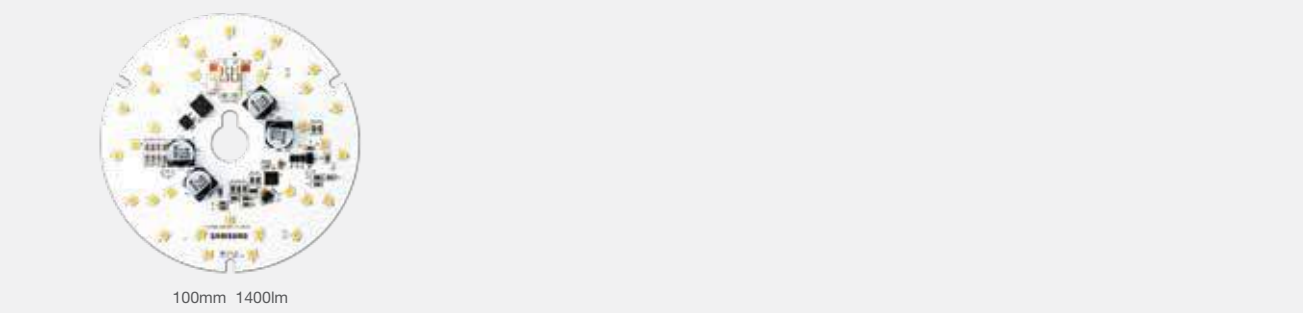
| Product    | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | Tp (°C) | CRI | CCT (K) | Beam Angle (°) | Size (mm) | Temperature Range (°C) | Life time (hrs) | Certification     | Part Number    |
|------------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|---------|-----|---------|----------------|-----------|------------------------|-----------------|-------------------|----------------|
| Round-090C | 1200               | 8.3                   | 23.6              | 350     | 540       | 146             | 55      | 80+ | 3000    | 115            | Φ90x5.7   | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8V0814B0WW |
|            | 1220               |                       |                   |         |           | 148             |         |     |         |                |           |                        |                 |                   | SI-N8U0814B0WW |
|            | 1250               |                       |                   |         |           | 152             |         |     |         |                |           |                        |                 |                   | SI-N8T0814B0WW |
| Round-110C | 2350               | 16.9                  | 24.2              | 700     | 900       | 139             | 55      | 80+ | 3000    | 115            | Φ110x5.7  | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8V1714B0WW |
|            | 2380               |                       |                   |         |           | 141             |         |     |         |                |           |                        |                 |                   | SI-N8U1714B0WW |
|            | 2460               |                       |                   |         |           | 146             |         |     |         |                |           |                        |                 |                   | SI-N8T1714B0WW |
| Round-130C | 3770               | 27.3                  | 39.0              | 700     | 900       | 139             | 55      | 80+ | 3000    | 115            | Φ130x5.7  | -20~+50                | 50000           | CE, cUL, ENEC, UL | SI-N8V2816B0WW |
|            | 3830               |                       |                   |         |           | 141             |         |     |         |                |           |                        |                 |                   | SI-N8U2816B0WW |
|            | 3950               |                       |                   |         |           | 145             |         |     |         |                |           |                        |                 |                   | SI-N8T2816B0WW |

ACOM Round 120mm



| Product               | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | Flicker (%) | THD (%) | Efficacy (lm/W) | Tp (°C) | CRI | CCT (K) | Beam Angle (°) | Size (mm) | Temperature Range (°C) | Life time (hrs) | Certification | Part Number     |
|-----------------------|--------------------|-----------------------|-------------------|-------------|---------|-----------------|---------|-----|---------|----------------|-----------|------------------------|-----------------|---------------|-----------------|
| ACOM Round (EU) Gen 2 | 1430               | 12.1                  | 230(AC)           | 100         | 15      | 118             | 25      | 80+ | 2700    | 115            | Φ120x5.5  | -20~+40                | 50000           | CE, ENEC      | SI-N8W1225B1EU  |
|                       | 1440               |                       |                   |             |         | 119             |         |     | 3000    |                |           |                        |                 |               | SI-N8V1225B1EU  |
|                       | 1550               |                       |                   |             |         | 128             |         |     | 4000    |                |           |                        |                 |               | SI-N8T1225B1EU  |
| ACOM Round (KR)       | 1460               | 11.2                  | 220(AC)           | 100         | 18      | 130             | 25      | 80+ | 5700    | 115            | Φ120x5.5  | -20~+40                | 50000           | -             | SI -N8Q1115B1KR |

ACOM Round 100mm

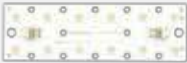


| Product         | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | Flicker (%) | THD (%) | Efficacy (lm/W) | Tp (°C) | CRI | CCT (K) | Beam Angle (°) | Size (mm) | Temperature Range (°C) | Life time (hrs) | Certification | Part Number    |
|-----------------|--------------------|-----------------------|-------------------|-------------|---------|-----------------|---------|-----|---------|----------------|-----------|------------------------|-----------------|---------------|----------------|
| ACOM Round (US) | 1530               | 16.2                  | 120(AC)           | < 30        | 11      | 94              | 25      | 90+ | 2700    | 115            | Φ100x11   | -20~+40                | 50000           | cUL, UL, T24  | SI-N9W1624B1US |
|                 | 1540               |                       |                   |             |         | 95              |         |     | 3000    |                |           |                        |                 |               | SI-N9V1624B1US |
|                 | 1600               |                       |                   |             |         | 99              |         |     | 3500    |                |           |                        |                 |               | SI-N9U1624B1US |
|                 | 1620               |                       |                   |             |         | 100             |         |     | 4000    |                |           |                        |                 |               | SI-N9T1624B1US |

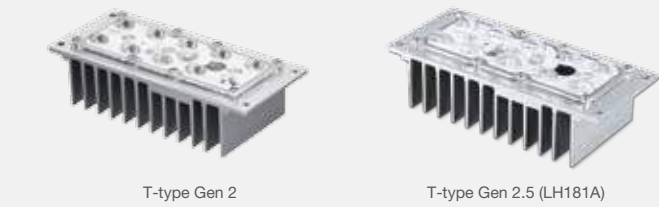


### Easy-to-use modular design with various lumen packages combined with IP66-certified durability, makes it the smart choice for use in the harshest of environments

- Wide range of engine combinations well-suited for a variety of harsh environment applications
- High luminous efficacy
- Available with a full range of compatible drivers

| Product                                                                                                           | Key Features                                                                                                                                                                                                                           | Efficacy (lm/W) | Lifespan |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
|  Modular Platform T-type Gen 2 | <ul style="list-style-type: none"><li>• Total solution integrating LED+Optics+Thermal</li><li>• With LH351B, higher lumen density of 2,650lm</li><li>• IP66</li></ul>                                                                  | ●●●●○           | ●●●●○    |
|  Array Gen 2                   | <ul style="list-style-type: none"><li>• Total solution integrating LED+Optics+Thermal</li><li>• High efficacy at module</li><li>• Suitable for flood and highbay lighting</li><li>• Robust design with waterproof durability</li></ul> | ●●●●○           | ●●●●●    |
|  HiLOM                         | <ul style="list-style-type: none"><li>• Greater design flexibility for various fixture designs</li><li>• High performance, 4,400lm (700mA) with efficacy of 132lm/W</li></ul>                                                          | ●●●●●           | ●●●●○    |

Modular Platform Engine



| Model                   | Light Distribution Type | Heat Sink | Connector | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Weight (g) | Waterproof/Dustproof Grade | Temperature Range (Operation, Tc) | Certification | Part Number    |                |
|-------------------------|-------------------------|-----------|-----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|------------|----------------------------|-----------------------------------|---------------|----------------|----------------|
| T-type Gen 2            | Type1 Short             | Fin       | Connector | 2650               | 21                    | 30                | 700     | 1000      | 126.2           | 75+ | 5000    | 295        | IP66                       | -30~+80                           | CE, UL        | SL-PGR2W53LBWW |                |
|                         | Type2 Very Short        |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W53MBWW |                |
|                         | Type2 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W57MBWW |                |
|                         | Type1 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGQ2W53LBWW |                |
|                         | Type2 Very Short        |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGQ2W53MBWW |                |
|                         | Type1 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W51SBGL |                |
|                         | Type1 Very Short        |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W6T1BGL |                |
|                         | Type2 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W52SBGL |                |
|                         | Type2 Very Short        |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W57SBGL |                |
|                         | Type2 Medium            |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W52MBGL |                |
|                         | Type5 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W55SBGL |                |
|                         | Beam Angle 85           |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-P7R2W585BGL |                |
|                         | Type1 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W51SBGL |                |
|                         | Type2 Very Short        |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W57SBGL |                |
|                         | Type2 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-PGR2W52SBGL |                |
|                         | Type2 Short             |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-P7R2W5R1BGL |                |
|                         | Type2 Long              |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-P7R2W5R2BGL |                |
|                         | Beam Angle 85           |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   |               | SL-P7R2W585BGL |                |
| T-type Gen 2.5 (LH181A) | -                       | Fin       | Connector | 2600               | 20                    | 28                | 700     | 1000      | 130.0           | 80+ | 4000    | 290        | IP66                       | +10 ~ +95                         | -             | SL-P8V2W6RA1WW |                |
|                         |                         |           | 2800      | 140.0              |                       |                   |         |           |                 |     |         |            |                            |                                   |               | 4000           | SL-P8T2W6RA1WW |
|                         |                         |           | 2850      | 142.5              |                       |                   |         |           |                 |     |         |            |                            |                                   |               | 5000           | SL-P8R2W6RA1WW |
|                         |                         |           | 2850      | 142.5              |                       |                   |         |           |                 |     |         |            |                            |                                   |               | 5700           | SL-P8Q2W6RA1WW |

Integrated Array Module



Array 47W



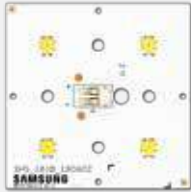
Array 70W

| Model       | Light Distribution Type | Heat Sink | Connector | Luminous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Imax (mA) | Efficacy (lm/W) | CRI | CCT (K) | Weight (g) | Waterproof/Dustproof Grade | Temperature Range (Operation, Tc) | Part Number    |
|-------------|-------------------------|-----------|-----------|--------------------|-----------------------|-------------------|---------|-----------|-----------------|-----|---------|------------|----------------------------|-----------------------------------|----------------|
| Array Gen 2 | Type2 Short             | Fin       | Connector | 6450               | 47                    | 52                | 900     | 2000      | 137             | 70+ | 5000    | 1100       | IP66                       | -30~+80                           | SL-IGR5E82SBWW |
|             | Type2 Short             |           |           | 9700               | 70                    | 52                | 1350    | 3000      | 139             |     |         | 1660       |                            |                                   | SL-IGR7E97SBWW |
|             | Beam Angle 70           |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   | SL-IGR7E970BWW |
|             | Beam Angle 120          |           |           |                    |                       |                   |         |           |                 |     |         |            |                            |                                   | SL-IGR7E9C0BWW |

HiLOM



HiLOM-HCF0



HiLOM-SC16



HiLOM-SC28



HiLOM-SM28



HiLOM-RM64



HiLOM-RH16



HiLOM-RH12

| Model      | Light Distribution Type | Heat Sink | Lumi-nous Flux (lm) | Power Consumption (W) | Input Voltage (V) | IF (mA) | Efficacy (lm/W) | CRI | CCT (K) | Weight (g) | Waterproof/Dustproof Grade | Temperature Range (Operation, Tc) | Certification | Part Number    |
|------------|-------------------------|-----------|---------------------|-----------------------|-------------------|---------|-----------------|-----|---------|------------|----------------------------|-----------------------------------|---------------|----------------|
| HiLOM-HCF0 | Ledil Victoria HB       | N/A       | 25700               | 148.83                | 45.1              | 3300    | 173             | 70+ | 240     |            |                            |                                   |               | SL-B7TANB0L2WW |
| HiLOM-SC16 | Ledil STRADA 2*2 MX     | N/A       | 7200                | 59.29                 | 24.9              | 2100    | 138             | 70+ | 17.5    |            |                            |                                   |               | SL-B7T5N90L2WW |
| HiLOM-SC28 | Ledil STRADELLA-IP-28   | N/A       | 4700                | 27.72                 | 19.8              | 1400    | 171             | 70+ | 21.2    |            |                            |                                   |               | SL-B7T2N80L2WW |
| HiLOM-SM28 | Ledil STRADELLA-IP-28   | N/A       | 2430                | 13.79                 | 19.7              | 700     | 176             | 80+ | 4000    | 21.2       | N/A                        | -30~+80                           | CE*, UL       | SL-B8T1N50L4WW |
| HiLOM-RM64 | Ledil STRADELLA 16 HB   | N/A       | 5550                | 31.5                  | 22.5              | 1400    | 176             | 80+ | 40.0    |            |                            |                                   |               | SL-B8T3N80L4WW |
| HiLOM-RH16 | Ledil STRADA 2*2        | N/A       | 5400                | 32.9                  | 23.5              | 1400    | 164             | 70+ | 40.0    |            |                            |                                   |               | SL-B7T3N80LCWW |
| HiLOM-RH12 | Ledil STRADA IP 2*6     | N/A       | 4050                | 24.71                 | 23.4              | 700     | 164             | 70+ | 32.5    |            |                            |                                   |               | SL-B7T2N70LCWW |

\* CE will be added in Q4.

Driver

- White Tunable Light
- Ambient Light
- Industrial Light
- Down & Spot Light
- Outdoor Light





SLP-DUA0250AUS



SLP-DUA4350AUS



SLP-DUA4550AUS

| Part Number    | Power Consumption (W) | Size (mm)         | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                                             |
|----------------|-----------------------|-------------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|--------------------------------------------------------------------|
| SLP-DUA0250AUS | 25                    | 103 x 67 x 29.5   |                   |                    | 350-1000               |                |         |         | cUL, UL       | >0.90        |                                                                    |
| SLP-DUA4350AUS | 35                    | 127 x 76.4 x 36.2 | 120-277           | 10-50              | 350-1400               | 88             | <20     | 0-10V   | cUL, UL       | >0.90        | Programmable Native White Tuning Dim to warm Auxiliary Power (24V) |
| SLP-DUA4550AUS | 55                    | 127 x 76.4 x 36.2 |                   |                    | 350-1400               |                |         |         | cUL, UL       | >0.90        |                                                                    |



SLP-DUA43501US



SLP-DUA45501US



SLP-DUA47501US

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                                             |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|--------------------------------------------------------------------|
| SLP-DUA43501US | 35                    | 270 x 33 x 25 |                   |                    | 350-1400               |                |         |         | cUL, UL       | >0.90        |                                                                    |
| SLP-DUA45501US | 55                    | 300 x 33 x 25 | 120-277           | 10-50              | 350-1400               | 88             | <20     | 0-10V   | cUL, UL       | >0.90        | Programmable Native White Tuning Dim to warm Auxiliary Power (24V) |
| SLP-DUA47501US | 75                    | 330 x 33 x 30 |                   |                    | 350-1000               |                |         |         | cUL, UL       | >0.90        |                                                                    |



SLP-DUA025DAWW

| Part Number    | Power Consumption (W) | Size (mm)         | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification     | Power Factor | Remark                                           |
|----------------|-----------------------|-------------------|-------------------|--------------------|------------------------|----------------|---------|---------|-------------------|--------------|--------------------------------------------------|
| SLP-DUA025DAWW | 25                    | 127 x 76.4 x 36.2 | 120-277           | 10-50              | 350-1000               | 88             | <20     | DALI    | CE, cUL, ENEC, UL | >0.90        | Programmable Device Type 8 Auxiliary Power (24V) |



SLP-DUA435D1US



SLP-DUA455D1US



SLP-DUA475D1US

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                           |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|--------------------------------------------------|
| SLP-DUA435D1US | 35                    | 270 x 33 x 25 |                   |                    | 350-1400               |                |         |         | cUL, UL       | >0.90        |                                                  |
| SLP-DUA455D1US | 55                    | 300 x 33 x 25 | 120-277           | 10-50              | 350-1400               | 88             | <20     | DALI    | cUL, UL       | >0.90        | Programmable Device Type 8 Auxiliary Power (24V) |
| SLP-DUA475D1US | 75                    | 330 x 33 x 30 |                   |                    | 350-1400               |                |         |         | cUL, UL       | >0.90        |                                                  |



SLP-D2A435D1EU



SLP-D2A455D1EU



SLP-D2A475D1EU

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                           |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|--------------------------------------------------|
| SLP-D2A435D1EU | 35                    | 270 x 33 x 25 |                   |                    | 350-1400               |                |         |         | CE, ENEC      | >0.90        |                                                  |
| SLP-D2A455D1EU | 55                    | 300 x 33 x 25 | 220-240           | 10-50              | 350-1400               | 88             | <20     | DALI    | CE, ENEC      | >0.90        | Programmable Device Type 8 Auxiliary Power (24V) |
| SLP-D2A475D1EU | 75                    | 330 x 33 x 30 |                   |                    | 350-1400               |                |         |         | CE, ENEC      | >0.90        |                                                  |



SLP-DUA47531WW

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming     | Certification | Power Factor | Remark                                                               |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|-------------|---------------|--------------|----------------------------------------------------------------------|
| SLP-DUA47531WW | 75                    | 330 x 30 x 30 | 120-277           | 10-50              | 350-1000               | 88             | <20     | 0-10V, DALI | CE, cUL, UL   | >0.90        | Programmable Native White Tuning Device Type 8 Auxiliary Power (24V) |

Ambient Light

Ambient Light



SI-CU1023001WW / SI-CU1023002WW

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification    | Power Factor | Remark                                               |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|---------|------------------|--------------|------------------------------------------------------|
| SI-CU1023001WW | 30                    | 300 x 30 x 21 | 120-277           | 14-54              | 350-800                | 87             | <20     | 0-10V   | Class P, cUL, UL | >0.9         | Output current adjustable by Rset, 1% - 100% Dimming |
| SI-CU1023002WW | 30                    |               | 120-277           |                    |                        |                |         |         | cUL, UL, Type TL |              |                                                      |



SI-CU1625001US / SI-CU1625002US

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification    | Power Factor | Remark                                                      |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|---------|------------------|--------------|-------------------------------------------------------------|
| SI-CU1625001US | 50                    | 300 x 30 x 21 | 120-277           | 15-54              | 700-1600               | 87             | <20     | 0-10V   | Class P, cUL, UL | >0.9         | Output current adjustable by Programming, 1% - 100% Dimming |
| SI-CU1625002US | 50                    |               | 120-277           |                    |                        |                |         |         | cUL, UL, Type TL |              |                                                             |



SI-C235150N1EU



SI-C2H5170N1EU

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                  |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-----------------------------------------|
| SI-C235150N1EU | 50                    | 280 x 30 x 21 | 220-240           | 30-270             | 100-350                | 94             | <20     | Non Dim | CE, ENEC      | >0.9         | Output current adjustable by Dip Switch |
| SI-C2H5170N1EU | 70                    | 360 x 30 x 21 |                   | 15-54              | 700-1750               | 91             |         |         |               |              |                                         |



SI-EPF006660WW



SI-EPF007040WW

| Part Number    | Power Consumption (W) | Size (mm)       | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                            |
|----------------|-----------------------|-----------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-----------------------------------|
| SI-EPF006660WW | 50                    | 300 x 30 x 21   | 120-277           | 20-50              | 500-1400               | 88             | <20     | 0-10V   | cUL, UL       | >0.9         | Output current adjustable by Rset |
| SI-EPF007040WW | 75                    | 359 x 30 x 26.5 |                   | 22-52              | 1000-2100              |                |         |         |               |              |                                   |



SI-CU7014011KR



SI-C2G814501KR / SI-C2H817201KR

| Part Number    | Power Consumption (W) | Size (mm)         | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                            |
|----------------|-----------------------|-------------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-----------------------------------|
| SI-CU7014011KR | 40                    | 160 x 46.4 x 30.8 | 120-277           | 25-50              | 500-700                | 87             | <20     | 1-10V   | KC            | >0.9         | Output current adjustable by Rset |
| SI-C2G814501KR | 45                    | 241 x 43 x 30.5   | 220-240           | 18-26              | 1680                   | 87             | <20     | 0-10V   | KC            | >0.9         | Fixed current                     |
| SI-C2H817201KR | 72                    | 300 x 43 x 30.5   |                   | 18-26              | 2550                   | 86             | <20     |         |               |              |                                   |



SI-CA1427501US



SI-CA2029601US

| Part Number    | Power Consumption (W) | Size (mm)     | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                         |
|----------------|-----------------------|---------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|------------------------------------------------|
| SI-CA1427501US | 75                    | 360 x 31 x 26 | 100-277           | 27-54              | 975-1400               | 88             | <20     | 0-10V   | cUL, UL       | >0.9         | Programmable Output Current, 5% - 100% Dimming |
| SI-CA2029601US | 100                   | 420 x 31 x 26 |                   | 24-48              | 1400-2000              |                |         |         |               |              |                                                |

Down & Spot Light



SI-EPF006640WW / SI-EPF006650WW



SI-OU1424001WW



SI-OU1424002WW

| Part Number    | Power Consumption (W) | Size (mm)           | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification    | Power Factor | Remark                                         |
|----------------|-----------------------|---------------------|-------------------|--------------------|------------------------|----------------|---------|---------|------------------|--------------|------------------------------------------------|
| SI-EPF006640WW | 15                    | 123 x 79 x 33       | 120-277           | 20-50              | 180-500                | 86             | <20     | 0-10V   | cUL, UL          | >0.9         | Output current adjustable by Rset              |
| SI-EPF006650WW | 30                    |                     |                   | 20-50              | 350-1050               | 86             | <20     |         |                  |              |                                                |
| SI-OU1424001WW | 40                    | 125.6 x 61.1 x 27.5 | 120-277           | 20-54              | 400-1400               | 86             | <20     | 0-10V   | cUL, UL, Type TL | >0.9         | Programmable Output Current, 1% - 100% Dimming |
| SI-OU1424002WW | 40                    | 125.6 x 61.1 x 27.5 | 120-277           | 20-54              | 400-1400               | 86             | <20     | 0-10V   | Class P, cUL, UL | >0.9         |                                                |



SI-CF70120D1EU



SI-C270134N1EU

| Part Number    | Power Consumption (W) | Size (mm)       | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                  |
|----------------|-----------------------|-----------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-----------------------------------------|
| SI-CF70120D1EU | 20                    | 110.4 x 52 x 22 | 220-240           | 2-43               | 250-700                | 87             | <20     | DALI    | CE, ENEC      | >0.9         | Output current adjustable by Dip Switch |
| SI-C270134N1EU | 34                    | 97 x 42.5 x 30  | 220-240           | 10-50              | 250-700                | 85             | <20     | Non Dim | CE, ENEC      | >0.9         |                                         |



SI-C242120N1KR

| Part Number    | Power Consumption (W) | Size (mm)        | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark        |
|----------------|-----------------------|------------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|---------------|
| SI-C242120N1KR | 20                    | 94.5 x 39.5 x 31 | 220-240           | 25-40              | 420                    | 86             | <10     | Non Dim | KC            | >0.9         | Fixed current |

Outdoor Light



SL-L27012517KR



SL-L21425017KR  
SL-L22127517KR  
SL-L2282A017KR



SL-L2422A517KR  
SL-L2562B017KR

| Part Number    | Power Consumption (W) | Size (mm)       | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                                                   |
|----------------|-----------------------|-----------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|--------------------------------------------------------------------------|
| SL-L27012517KR | 25W                   | 265 x 70 x 48.5 | 220-240           | 27-33              | 700                    | 86             | <20     | 1-10V   | KC, KS        | >0.95        | Independent type, IP67, Molex, <THD 30%@1V Dimming, High Surge (±8-10KV) |
| SL-L21425017KR | 50W                   |                 |                   |                    | 1400                   | 86.5           |         |         |               |              |                                                                          |
| SL-L22127517KR | 75W                   |                 |                   |                    | 2100                   | 87             |         |         |               |              |                                                                          |
| SL-L2282A017KR | 100W                  |                 |                   |                    | 2800                   | 88.5           |         |         |               |              |                                                                          |
| SL-L2422A517KR | 150W                  |                 |                   |                    | 4200                   | 90.5           |         |         |               |              |                                                                          |
| SL-L2562B017KR | 200W                  |                 |                   |                    | 5600                   | 91             |         |         |               |              |                                                                          |



SL-L27012518KR



SL-L21425018KR  
SL-L22127518KR  
SL-L2282A018KR



SL-L2422A518KR  
SL-L2562B018KR

| Part Number    | Power Consumption (W) | Size (mm)       | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                                       |
|----------------|-----------------------|-----------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|--------------------------------------------------------------|
| SL-L27012518KR | 25                    | 265 x 70 x 48.5 | 220-240           | 27-33              | 700                    | 86             | <20     | 1-10V   | KC, KS        | >0.95        | Independent type, IP67, Waterproof JST, High Surge (±8-10KV) |
| SL-L21425018KR | 50                    |                 |                   |                    | 1400                   | 86.5           |         |         |               |              |                                                              |
| SL-L22127518KR | 75                    |                 |                   |                    | 2100                   | 87             |         |         |               |              |                                                              |
| SL-L2282A018KR | 100                   |                 |                   |                    | 2800                   | 88.5           |         |         |               |              |                                                              |
| SL-L2422A518KR | 150                   |                 |                   |                    | 4200                   | 90.5           |         |         |               |              |                                                              |
| SL-L2562B018KR | 200                   |                 |                   |                    | 5600                   | 91             |         |         |               |              |                                                              |

Outdoor Light



SL-L27012503KR



SL-L21425003KR  
SL-L22127503KR



SL-L2282A013KR  
SL-L2352A213KR  
SL-L2422A513KR  
SL-L2562B013KR

| Part Number    | Power Consumption (W) | Size (mm)       | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                        |  |  |
|----------------|-----------------------|-----------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-------------------------------|--|--|
| SL-L27012503KR | 25                    | 177 × 40 × 37   | 220-240           | 24-33              | 700                    | 85             | <20     | 1-10V   | KS            | >0.9         | Independent type, IP67, Molex |  |  |
| SL-L21425003KR | 50                    | 210 × 40 × 37   |                   |                    | 1400                   | 87             |         |         |               |              |                               |  |  |
| SL-L22127503KR | 75                    | 210 × 40 × 37   |                   |                    | 2100                   | 88             |         |         |               |              |                               |  |  |
| SL-L2282A013KR | 100                   | 228 × 68 × 39.5 |                   |                    | 2800                   | 89             |         |         |               |              |                               |  |  |
| SL-L2352A213KR | 125                   |                 |                   |                    | 3500                   | 90             |         |         |               |              |                               |  |  |
| SL-L2422A513KR | 150                   |                 |                   |                    | 4200                   | 90             |         |         |               |              |                               |  |  |
| SL-L2562B013KR | 200                   |                 |                   |                    | 5600                   | 91             |         |         |               |              |                               |  |  |



SL-L2701151AKR  
SL-L2701251AKR



SL-L2701301AKR  
SL-L2701401AKR  
SL-L2701501AKR



SL-L2701751AKR  
SL-L2701A01AKR



SL-L2701A51AKR  
SL-L2701B01AKR

| Part Number    | Power Consumption (W) | Size (mm)       | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                      |  |
|----------------|-----------------------|-----------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-----------------------------|--|
| SL-L2701151AKR | 15                    | 177 × 40 × 37   | 220-240           | 18-33              | 700                    | 84             | <20     | 1-10V   | KS            | >0.9         | Independent type, IP67, KET |  |
| SL-L2701251AKR | 25                    |                 |                   | 18-33              |                        | 85             |         |         |               |              |                             |  |
| SL-L2701301AKR | 30                    | 210 × 40 × 37   |                   | 39-63              |                        | 86             |         |         |               |              |                             |  |
| SL-L2701401AKR | 40                    |                 |                   | 39-63              |                        | 87             |         |         |               |              |                             |  |
| SL-L2701501AKR | 50                    |                 |                   | 39-63              |                        | 88             |         |         |               |              |                             |  |
| SL-L2701751AKR | 75                    |                 |                   | 85-125             |                        | 89             |         |         |               |              |                             |  |
| SL-L2701A01AKR | 100                   | 182 × 66 × 38.8 |                   | 85-125             |                        | 90             |         |         |               |              |                             |  |
| SL-L2701A51AKR | 150                   | 228 × 68 × 39.5 |                   | 177-243            |                        | 91             |         |         |               |              |                             |  |
| SL-L2701B01AKR | 200                   |                 |                   | 177-243            |                        | 92             |         |         |               |              |                             |  |

Outdoor Light



SL-L2701A5N1KR



SL-L2701B0N1KR

| Part Number    | Power Consumption (W) | Size (mm)       | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                 |
|----------------|-----------------------|-----------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|----------------------------------------|
| SL-L2701A5N1KR | 150                   | 258 x 68 x 33.9 | 220-240           | 80-100             | 700                    | 92             | <20     | Non Dim | KS            | >0.9         | Independent type, 2 channel, IP67, KET |
| SL-L2701B0N1KR | 200                   |                 |                   | 100-130            | 700                    | 93             |         |         |               |              |                                        |



SL-LU0923501US



SL-LU1425501US



SL-LU2027801US



SL-LU262A001US

| Part Number    | Power Consumption (W) | Size (mm)         | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                            |
|----------------|-----------------------|-------------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-----------------------------------|
| SL-LU0923501US | 35                    | 193 × 42.5 × 34.5 | 120-277           | 30-39              | 700-1050               | 87             | <20     | 0-10V   | cUL, UL       | >0.9         | Programmable Output Current, IP67 |
| SL-LU1425501US | 55                    | 173 × 67.5 × 40   |                   |                    | 1400                   | 88             |         |         |               |              | Independent type, IP67            |
| SL-LU2027801US | 78                    | 173 × 67.5 × 40   |                   |                    | 2000                   | 88             |         |         |               |              |                                   |
| SL-LU262A001US | 100                   | 187 × 67.5 × 40   |                   |                    | 2600                   | 88             |         |         |               |              |                                   |

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Program Overview

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|---------------------|--------------------------------------------------|-------------|--------------------------------|------|--------|--------------------------------------------------------------------|------------|--------------|------------|
| Customer Location   | US                                               | Korea/China | -                              |      |        | EU/US/Asia                                                         | China      | Korea        | China      |
| Cost Discount       | Testing                                          | -20%        | -30%                           | -30% | -30%   | -20%                                                               | -30%       | -20%         | -30%       |
|                     | Handling                                         |             |                                | -    |        |                                                                    |            |              |            |
| Test Period Savings | -30 ~ -50%                                       | -30 ~ -50%  | -20 ~ -30%                     |      |        | -20 ~ -30%                                                         | -20 ~ -30% | -20 ~ -30%   | -20 ~ -30% |
| Company             | Intertek                                         |             | KTL (Korea Testing Laboratory) |      |        | TUV SUD                                                            |            | CCIC         |            |
| Branch              | North America, China, Hong Kong, Korea           |             | Korea, China                   |      |        | North America, Germany, China, Hong Kong, Singapore, Taiwan, Korea |            | Korea, China |            |

1) Energy Star, DLC's duration is not included for Lumen Maintenance test duration.  
2) Discount rate is based on the standard price of Companies.

Process



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| Part Number    | Power Consumption (W) | Size (mm)         | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                 |
|----------------|-----------------------|-------------------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|------------------------|
| SL-LA7012502US | 25                    | 193 × 42.5 × 34.5 | 100-277           |                    | 700                    | 85             | <20     | 0-10V   | cUL, UL       | >0.9         | Independent type, IP67 |
| SL-LA1425002US | 50                    |                   |                   | 18-36              | 1400                   | 88             |         |         |               |              |                        |
| SL-L22127502US | 75                    | 173 × 67.5 × 40   |                   |                    | 2100                   | 89             |         |         |               |              |                        |
| SL-LA142A002US | 100                   | 187 × 67.5 × 40   |                   | 17-34              | 2800                   | 87             |         |         |               |              |                        |
| SL-LA212A502US | 150                   | 221 × 67.5 × 40   |                   | 18-36              | 4200                   | 88             |         |         |               |              |                        |
| SL-L2282B002US | 200                   | 251 × 67.5 × 40   |                   |                    | 5600                   | 88             |         |         |               |              |                        |



| Part Number    | Power Consumption (W) | Size (mm) | Input Voltage (V) | Output Voltage (V) | Output Current/ch (mA) | Efficiency (%) | THD (%) | Dimming | Certification | Power Factor | Remark                                              |
|----------------|-----------------------|-----------|-------------------|--------------------|------------------------|----------------|---------|---------|---------------|--------------|-----------------------------------------------------|
| SL-LA212A001WW | 100W                  | Φ130 x 70 | 120-240           | 29-71              | 140-2100               | 90.5           | <20     | 0-10V   | CE, ENEC      | >0.9         | Independent type, Programmable Output Current, IP65 |

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